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Chas E Bendire

THE AUK:

A QUARTERLY JOURNAL OF

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VOL. XV.

JANUARY, 1898.

NO. I.

IN MEMORIAM:

CHARLES EMIL BENDIRE.¹

BORN 27TH APRIL, 1836. DIED 4TH FEBRUARY, 1897.

BY J. C. MERRILL.

Frontispiece.

THE AMERICAN ORNITHOLOGISTS' UNION has again suffered the loss of a prominent member and officer, and, in accordance with a standing resolution, the President has called upon the writer to prepare a memorial of the life and work of Charles Emil Bendire, Captain United States Army, retired, brevet Major, who, after an illness of several months, died of Bright's disease at Jacksonville, Florida, on the fourth of February, 1897. This is undertaken not as a perfunctory duty, but as a tribute to one I have known for more than twenty-two years, first as a correspondent, later as an intimate personal friend, our intercourse closing with a letter written by him a few days before his death.

Karl Emil Bender was born at Koenig im Odenwald in the Grand Duchy of Hesse-Darmstadt on April 27, 1836. The eldest of a family of two sons and three daughters, of whom two of the latter now survive, he received private instruction at home up to

¹ An address delivered at the Fifteenth Congress of the American Ornithologists' Union, at New York, Nov. 10, 1897.



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the age of twelve years, and then passed five years at a theological school at Passy, near Paris. Leaving suddenly, it is understood on account of some boyish escapade, he returned to his home for a short time and then, upon the advice of a friend and accompanied by his younger brother Wilhelm, sailed for New York in 1853.

Upon arrival the new world did not meet their glowing expectations, and in a short time Wilhelm Bender sailed for home, but was lost overboard during the voyage.

Not long after this young Bender enlisted, changing his name to Bendire and dropping his middle initial, which he reassumed about fifteen years ago in correspondence and in his published notes; but to the time of his death he was known officially as Charles Bendire and his name so appears upon the title pages of his 'Life Histories.'

As the greater part of Major Bendire's life was passed in the Army, it is fitting to briefly recount his services and stations.

Enlisting at the age of eighteen years on June 10, 1854, he served for five years as a Private and Corporal in Company D, First Dragoons. Remaining out of the service for a year, he again enlisted June 8, 1860, in the 4th Cavalry, serving as Private, Corporal, Sergeant, and Hospital Steward until September 9, 1864, when he was discharged by reason of appointment as 2nd Lieutenant, 2nd Infantry, of date May 18, 1864. He was transferred to the 1st Cavalry September 9, 1864, promoted 1st Lieutenant, November 12, 1864, Captain, February 21, 1873, and placed upon the retired list for disability contracted in the line of duty, April 24, 1886.

He was brevetted 1st Lieutenant, June 11, 1864, for "gallant and meritorious services in the battle of Trevillion Station, Va.," and Major, February 27, 1890, for "gallant services in action against Indians at Canyon Creek, Montana, September 13, 1877."

During his first enlistment his company was stationed in New Mexico — then including Arizona — but he did no collecting then nor during the Civil War, through which he served, as an officer, in the Army of the Potomac.

After the war he passed three months in 1867 at his former home in Germany, and after this — omitting mention of temporary details and duty — he was stationed in Louisiana until December,

1865; at Drum Barracks, California — now San Pedro — until April, 1868; at Fort Lapwai, Idaho, to June, 1871; and at Camp Lowell, Arizona, to January, 1873. He was on recruiting service at St. Louis until September, 1874; at Camp Harney, Oregon, to May, 1878; at Fort Walla Walla, Washington, to May, 1882; at Fort Klamath, Oregon, to September, 1883; in the East for about one year, and at Fort Custer, Montana, to December, 1885, being retired in the following spring.

From this record it will be seen what exceptional facilities Major Bendire enjoyed for collecting birds and studying their habits in regions then but little known to ornithologists. During these years he saw much hard field service which he performed with the care and fidelity that characterized all that he did. It should be recorded that the testimony of those who accompanied him while in the field is unanimous to the effect that he never allowed his interest in birds to interfere in the least with the strict performance of duty; and more than one anecdote is related of his losing valuable specimens through his unwillingness to delay his command for a few moments.

It is probable that while stationed at Fort Lapwai, Idaho, from 1868 to 1871, Major Bendire first began the systematic study and collection of objects of natural history, and that he was led thereto by his fondness for hunting and interest in the haunts and habits of game mammals and birds. During the early period of his work Major Bendire, while a most assiduous and successful oölogist, paid little attention to collecting birds except for the purpose of identifying sets of eggs. This was unfortunate, because he thus failed to add a number of southern species to our fauna in localities where, at a later period, many such were secured by other collectors. Still, he first obtained in the United States several Mexican species and discovered certain new ones, as *Peucea carpalis*, and *Harporhynchus bendirei*; he was also the first to investigate the breeding habits and procure the eggs of a considerable number of our western birds.

Many ornithologists do not, perhaps, realize that Major Bendire was an assiduous collector in other fields and that at the instance of Professor Baird he sent much good material to the National Museum. In addition to the three species of birds that were

dedicated to him, viz.: *Megascops asio bendirei* Brewster, *Loxia curvirostra bendirei* Ridgway, and *Harporhynchus bendirei* Coues, his name will be remembered in other branches of science. Thus, a mammal bears the name *Atophrax bendirei* Merriam; a fish, *Potamocottus bendirei* Bean, and three fossil trees are *Acer bendirei* Lesquereux, *Rhus bendirei* Lesquereux, and *Marsilea bendirei* Ward. He also first cleared up the life history of the 'Red Fish' of Idaho, showing that the supposed little land-locked red salmon, *Oncorhynchus kennerlyi*, is really the young breeding male or grilse of *Oncorhynchus nerka*.

While in Washington on leave of absence and on duty from September, 1883, to August, 1884, Major Bendire, at Professor Baird's request, assumed charge, as Honorary Curator, of the Department of Oölogy in the U. S. National Museum, which was in a neglected condition. Most of the eggs of North American land birds were stored without order and very many were of more or less doubtful identification, but the latter have since been eliminated from the collection; the eggs of the water birds were in a somewhat more satisfactory condition, and many are still retained. With his characteristic energy, Major Bendire at once went over this material and incorporated with it his private collection of about 8,000 specimens, which he presented to the Museum, and which is the basis of the present collection of about 52,000 specimens, acquired largely by his personal efforts and by the gifts of his friends and correspondents. This collection is the culmination of Major Bendire's life work as an oölogist; its excellent arrangement, the fine condition and careful identification of the specimens, and the full series of most species being too well known to the members of the Union to need detailed description. There are few of us who have not gladly contributed sets of especially rare eggs, knowing that they would nowhere be of more real scientific use and value than in our friend's custody.

Having rearranged the collection of eggs to his satisfaction and made it available for study while constantly adding to it, he was prepared to undertake a work which he had long had in mind, and which was suggested to him by Professor Baird. This was to be an Oölogy of North American birds, but as notes and material gathered by an extensive correspondence and careful

search of the records were accumulated, it was found advisable to extend the scope of the work which, in its final form, is well described by its title 'Life Histories of North American Birds,' though this name was not decided upon until much of the first volume was written. In the preparation of this volume a great deal of material for the succeeding volumes was gathered, and it should be here recorded that had more encouragement been given to the work in certain quarters, the subsequent volumes would have appeared promptly, and the proposed five, or possibly six, volumes might have been almost, if not quite, completed before the author's lamented death. The resulting loss to American Ornithology is greatly to be deplored, for the two volumes which have appeared fill a place peculiar to themselves and no other publication is in any way a substitute. The first volume, issued in July, 1892, was greeted with the greatest satisfaction by ornithologists, and while it met with scant notice in 'The Auk,' foreign journals gave it a most cordial welcome. This was followed in September, 1896, by the second volume, which fully sustained the author's high reputation, and upon these will rest Major Bendire's secure fame as an ornithologist.

Besides the uniform excellence of the work, two points deserve especial mention, although this is not the place for a general criticism, nor are trite expressions of praise needed to enhance the high appreciation of the work by ornithologists. One is the care exercised in giving the geographical distribution of each form and the extent of its breeding range; these, based upon the latest and most reliable data and the personal identification or reidentification of specimens, are beyond comparison the best ever published. This necessary examination of specimens was most fortunate, for it had much to do with extending the scope of the work as originally planned, and gave the author an enviable position as an ornithologist of sound judgment. The second point is the large amount of fresh, unpublished material incorporated in the 'Life Histories'; much of this is based upon the author's own observations during his long residence in the West supplemented by information derived from his extensive correspondence, the authority and credit for which are carefully given.

A word as to the plates cannot be omitted. No superior work has ever been done, and no praise can be too great to apply to

them. The present writer was in a position to know with what painstaking care and accuracy Major Bendire compared the successive proofs of the plates in the first volume with the individual eggs selected as types, and how often he returned the 'final' proofs to the lithographers for changes in some minute detail that his critical eye detected. It should be stated emphatically that Major Bendire is in nowise responsible for the many serious and inexcusable typographical errors that so disfigure the second volume.

There are few Active Members of the Union who were not personally acquainted with Major Bendire, as he was one of its founders and rarely failed to be present at the annual meetings. On different occasions he was a member of several of the Committees, and at the time of his death was one of the Council of the Union.

Major Bendire was not a voluminous writer. His earlier records were mostly in letters to Allen, Baird, Brewer, and Coues, who sometimes, beginning about 1872, published them as special notes, at others brought them together as a local list. Later he wrote more freely over his own signature, publishing brief records as well as longer articles, as on the breeding habits of *Sphyrapicus*, *Passerella*, *Glaucidium*, and others. His correspondence increased to burdensome proportions before his death, but he attended to it faithfully and gladly, not only obtaining good material for his work, but doing much to establish Oölogy on a broader and safer basis, and to impress upon the younger collectors the paramount importance of properly identifying such specimens as they might collect. He was often consulted as to the identification of eggs, and did not hesitate to expose such men as he was convinced were given to fraudulent practices. This detestation of fraud and insincerity was a marked feature of his character. Frank yet reserved, bluff, honest and truthful to bluntness, he had the courage of his convictions, which he did not fail to make clear when occasion required. Simple in habits, unselfish, and always ready to help others, Major Bendire is sincerely mourned, not only by the members of this Union, but by all those to whom he was known only by correspondence or by his secure title to scientific remembrance, his 'Life Histories of North American Birds.'



CAYENNE SWIFT & NEST.

THE CAYENNE SWIFT, *PANYPTILA CAYENNENSIS*
(GMELIN).

BY CHARLES W. RICHMOND.

Plate I.

THIS elegant little Swift, although described and figured over a century ago, and ranging over a large portion of tropical America, has always been a scarce bird in collections, while its habits and manner of nesting are as yet very imperfectly known. It was introduced to naturalists as the *Martinet à collier, de Cayenne*¹ by Buffon, who gave a recognizable colored figure of it, and Gmelin in 1788 gave it the name *Hirundo cayennensis*.

This species, which is the type of the genus *Panyptila*, ranges from Nicaragua to southeastern Brazil, and from the fact that it has only recently been found to occur in Central America, north of Panama, it is to be expected that future observations will considerably extend the range. The only other species of the genus is the remarkable *P. sancti-hieronymi*, confined, as far as known, to certain mountains of Guatemala. It is very much larger than the first-named species, but of precisely the same coloration. It, also, is very rare in collections, much more so, in fact, than the Cayenne Swift, due to its inaccessible habitat, and to the meteor-like flight, which renders its collection a matter of extreme difficulty.

References to the Cayenne Swift are few and far between in ornithological literature, and information respecting its life history is very meagre indeed. Messrs. Salvin and Godman in reviewing the species recently in their great work on Central American birds,² wrote: "We have no specimen from our country, but Salvin was shown by Mr. Lawrence in 1874 a specimen with its nest which was found near the Chagres River by Dr. T. K. Merritt, the discoverer of *Microchera albocoronata*. Writing in 1884, Mr. Lawrence says that the bird was captured in its nest,

¹ Planch. Enlum., pl. 725, fig. 2.² Biol. Cent. Am., Aves, II, p. 371.



GAYENNE SWIFT & NEST.

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Plate I.

THIS elegant little Swift, although described and figured over a century ago, and ranging over a large portion of tropical America, has always been a scarce bird in collections, while its habits and manner of nesting are as yet very imperfectly known. It was introduced to naturalists as the *Martinet à collier, de Cayenne*¹ by Buffon, who gave a recognizable colored figure of it, and Gmelin in 1788 gave it the name *Hirundo cayennensis*.

This species, which is the type of the genus *Panyptila*, ranges from Nicaragua to southeastern Brazil, and from the fact that it has only recently been found to occur in Central America, north of Panama, it is to be expected that future observations will considerably extend the range. The only other species of the genus is the remarkable *P. sancti-hieronymi*, confined, as far as known, to certain mountains of Guatemala. It is very much larger than the first-named species, but of precisely the same coloration. It, also, is very rare in collections, much more so, in fact, than the Cayenne Swift, due to its inaccessible habitat, and to the meteor-like flight, which renders its collection a matter of extreme difficulty.

References to the Cayenne Swift are few and far between in ornithological literature, and information respecting its life history is very meagre indeed. Messrs. Salvin and Godman in reviewing the species recently in their great work on Central American birds,² wrote: "We have no specimen from our country, but Salvin was shown by Mr. Lawrence in 1874 a specimen with its nest which was found near the Chagres River by Dr. T. K. Merritt, the discoverer of *Microchera albocoronata*. Writing in 1884, Mr. Lawrence says that the bird was captured in its nest,

¹ Planch. Enlum., pl. 725, fig. 2.² Biol. Cent. Am., Aves, II, p. 371.

the latter being a remarkable structure, composed of some kind of silk-weed, and, being probably waterproof, was used by the bird as a domicile in the rainy season. Its shape was like a sleeve, three or four inches in diameter and nine or ten inches long. This nest was, therefore, somewhat similar to that of *P. sancti-hieronymi* but a good deal smaller, and had probably been attached to a rock in a similar way." The nest of the Guatemalan species is described as follows: "The nest of this species is a remarkable structure, made entirely of the downy seeds of some plant; these are glued together, doubtless by the saliva of the bird, so as to form a long bag-like structure with the opening below. The nest itself is near the top of the inverted bag, and the bird on entering the mouth must climb to the top by its feet. The eggs are not known."

Up to 1892 the Cayenne Swift had not been traced north of Panama, but during the summer of this year while collecting birds in eastern Nicaragua I had the good fortune to find the species quite abundant on the Escondido River, at a point about 50 miles from its mouth. At that locality, on the 'I. P.' plantation, three species of Swifts were common, but from its high-flying habits the *Panyptila* was for a time overlooked. It was not long, however, before the presence of a fork-tailed species was detected, owing to its habit of frequently spreading the tail during flight. On June 28, or about a month after I began to shoot at Swifts, my efforts to bring down a specimen were finally successful.

The great difficulty in securing specimens was not due to the rapid flight of the bird, but to the high altitudes at which they ordinarily passed the time. In fair weather it was utterly impossible to shoot any species of Swift, but on cloudy afternoons or just before dusk, following long rainy spells, all three species would frequently descend within range of our guns. Even under the most propitious conditions for shooting Swifts, it was no easy task to recover the dead birds; those falling in the river were liable to be devoured by voracious fishes, or if dropping elsewhere than on the small grass plot in front of the house were almost certain to be lost in the heavy grass and weeds which grew everywhere. Wounded birds falling some distance away were invariably lost. After many trials, at favorable times between May and October, and an expenditure of about three

hundred cartridges, I was the possessor of nine Cayenne Swifts and about a dozen of the two species of *Chætura*.

From the little information available, and from my own experience, it would seem that this Swift is rather local in its distribution, a colony of the birds being found in one locality and none at all a few miles distant. Mr. Chapman found them to be common at La Brea in Trinidad¹ but observed none at other localities on that island. The 'I. P.' plantation was the only place in Nicaragua where I noticed them, and none were seen on the Rio Frio in Costa Rica, although a large assemblage of other species was found late one afternoon on that river.

These birds pass the day executing their gyrations high in the air, often considerably above the other species, at times, however, freely associating with them. They work over a considerable area in search of food, usually in loose flocks. One moment many Swifts will be over head, a little later none are to be seen except at the opposite end of the plantation or across the river. In a short time — ten minutes or so — they are back again, and the manœuvre is repeated. Thus while shooting Swifts, we will have many opportunities to bring down birds for a short time, followed by an intermission in which to look for lost ones. In my case the intermission was usually passed in marveling over my inability to shoot specimens with cartridges which had been soaked for a week or more in salt water.

In ordinary flight the tail is closed, and the bird cannot easily be distinguished from the spiny-tailed species, but individuals often pause in their evolutions and soar for a brief interval at which time the tail is widely spread.

The note usually uttered by this Swift is a pleasing, rather long-drawn *chee* or *chee-ee*, at other times a *chee-wee-wee-wee*, given in a shrill pitch. Wounded birds have a squeaky, clicking note, several times repeated.

Although the birds were so numerous, the thought of finding a nest did not occur to me. Nests of many of the tropical birds are so well concealed, so carefully protected from the invasions of snakes, ants, monkeys, and other animals, and the vegetation is so very dense that one has little chance of finding them except

¹ Bull. Am. Mus. Nat. Hist., VI., 58.

by mere accident. It was, then, quite a surprise to meet with a nest during one of my daily collecting trips. Early in the morning of August 23, while returning from a short tramp, I had almost reached the edge of the forest, when my attention was drawn to a mixed company of birds feeding in an immense tree which stood directly in my path. Among the birds were Montezuma Yellow-tails, two species of Toucans, and some small Parrots. Wounding a Yellow-tail, I was endeavoring to keep it in sight, when a small bird dashed in from an opening in the forest and with an upward sweep disappeared on the trunk of the tree at a point about 70 feet from the ground. Its movements were so sudden and unexpected that by the time I realized just where the bird had disappeared, it had entered its nest, a peculiar structure eight or nine inches long, which was attached to the under surface of the trunk, and so nearly resembled it in its smooth grayish appearance that under other circumstances it would have escaped notice. When first observed, the nest was still quivering from the ingress of the bird, proving it to be of a soft yielding nature. It was attached to the trunk, probably by the saliva of the bird, but this point could not be definitely learned.

It was of almost exactly the same color as the bark; the entrance, at the bottom, was very large, nearly the diameter of the nest at the lower part, which appeared to be about three inches, with a slight bulging at the upper end.

On shooting at the nest there was a struggle inside, which shook it considerably, and presently the bird appeared at the entrance and fell to the ground. To my astonishment, it was a Cayenne Swift, and on dissection proved to be a male. There were no indications that the bird was nesting, and the probabilities are that it was simply using the nest as a place of refuge during rainy weather.

On visiting the place next day with a pair of field glasses, I could determine little concerning the composition of the nest, except that it had the appearance of being stuccoed with some material resembling the bark in color.

The plate accompanying this number of 'The Auk' gives a very life-like figure of the bird and its nest, although the bird in flight, as above mentioned, spreads its tail only at irregular intervals.

WILLIAM SWAINSON TO JOHN JAMES AUDUBON.

(*A hitherto unpublished letter.*)

BY DR. ELLIOTT COUES.

WILLIAM MACGILLIVRAY'S collaboration with Audubon in the production of the 'Ornithological Biography' and of the 'Synopsis' is already well known. The case is properly set forth in Audubon's preface, and still more fully in Audubon's Journals, now in process of publication by Miss M. R. Audubon. I have also had more than one occasion to characterize the happy combination of these two great ornithologists.¹

But few can be aware that in 1830 there was some chance of William Swainson's becoming Audubon's collaborator, and no little danger that a classification of North American Birds might be made in the mystical jargon of that quinary fad which Macleay, Vigors, and Swainson had taken up. The following letter, which Miss Audubon has kindly allowed me to copy and use, shows that Audubon had made certain propositions to Swainson, touching the latter's collaboration; and that Swainson, who evidently thought no small beer of himself, would enter into no arrangements unless his name should appear as that of co-author with Audubon's. We see him holding off for some such understanding as that which resulted in Swainson and Richardson's 'Fauna Boreali-Americana.'

Having sufficiently shuddered at the thought of what we escaped, we can read at our leisure and pleasure Swainson's stiff declination of Audubon's terms, as follows—the letter being printed literally and punctually true to the original in Swainson's handwriting:

"TETTENHANGER GREEN

2d October 1830

"*My dr Sir*

"I have refrained from replying to your letter until I thought you had returned to London.

"Either you do not appear to have understood the nature of my

¹ Bull. Nutt. Orn. Club, V, 1880, p. 201; Key N. A. Birds, 2d ed., 1884, p. xxii.

proposition on supplying scientific information for your work, or you are very erroneously informed on the manner in which such assistance is usually given. Dr Richardson, and a hundred others, similarly situated, might with equal justice say that no name should appear but their own; as it would rob them of their fame, because notes are furnished by one or two other persons, your friends would tell you, if you enquired of them, that even *my* name would *add* something to the value of 'The Birds of America'. You pay me compliments on my scientific knowledge, and wished you possessed a portion; & you liken the acquisition of such a portion to purchasing a sketch of an eminent painter—the simile is good. but allow me to ask you, whether, after procuring the sketch, you would mix it up with your own, and pass it off to your friends as your production? I cannot possibly suppose that such would be your duplicity and I therefore must not suppose that you intended I should give all the scientific information I have laboured to acquire during twenty years on ornithology—conceal my name,—and transfer my fame to your pages & to your reputation.

"Few have enjoyed the opportunity of benefiting by the advice and assistance of a scientific friend so much as yourself; and no one, I must be allowed to say, has evinced so little inclination to profit by it. When I call to mind the repeated offers I have made you to correct the nomenclature of your birds, from the first time of our acquaintance, and recollect the dislike you appeared to have to receiving any such information or correction, I cannot but feel perfect surprize at your now wishing to profit by that aid, you have hitherto been so indifferent about.

"Let me however urge upon you one advise which, for your own sake, I should be sorry you despised. It is to characterize yourself, or get some friend to do so for you, all your new species. The specimens, you tell me, are now in England, & the task will be comparatively easy. I urge this, because you may not be aware that a new species, deposited in a museum, is of no authority whatsoever, *until its name and its character are published*. I have repeatedly set my face against such authorities, so has Mr Vigors, so has Ch. Bonaparte, and on this head we are all perfectly unanimous. Unless, therefore, this is done, you will, I

am fearful, lose the credit of discovering nearly all the new species you possess, and this I again repeat, for your own sake I should be sorry for. To me, individually, your not doing so, would rather be advantageous.

"The more a book is quoted, the more is its merits admitted, and its authority established. it was on this account I so repeatedly requested the *use* only, of a copy of your book, that it might have been cited in "Northern Zoology" not having it—I could not therefore mention it

"I shall always be as thankful to you as formerly for any information on the habits, economy, and manners of birds; but, as to *species*, I want not, nor do I ever ask, the opinions of any one. that is quite a different matter, and entertaining peculiar ideas on that subject, you must not feel surprised at my differing from you in almost every instance. My reasons will always be laid before the public. In the present case, we totally differ about *species* of Woodpeckers. I shall not, however propitiate a favourable opinion from you, or any one, by a compliment and therefore I will wait for some species which you yourself will admit, which I shall then give your name to, I am rather glad you did not accept my offer, for I am *now* assisting in bringing out an Octavo edition of Wilson, by Sir W Jardine which will be arranged according to *my* nomenclature.

Yours my dr Sir

Very faithy

W SWAINSON"

Though the proposed literary partnership thus fell through, the two men continued on the most friendly personal terms. Audubon repeatedly speaks handsomely of his friend Swainson in his Journals; they were often together, both in England and in France; each dedicated a new species to the other; and one of the most complimentary reviews Audubon's work ever received was from Swainson's pen.

NOTES ON THE BIRDS OF FORT SHERMAN, IDAHO.

BY J. C. MERRILL,

*Major and Surgeon, U. S. Army.**(Concluded from Vol. XIV, p. 357.)*

Dolichonyx oryzivorus.—The well-known song of the Bobolink was heard in July at a ranch on the St. Joseph River, and an old settler told me that the birds were quite common there each year.

Molothrus ater.—As in most parts of the Northwest, the Cowbird is rare at Fort Sherman. A single specimen only, a female, was taken May 25, 1896. Among the many nests of small birds examined none contained either egg or young of this parasite.

Agelaius phoeniceus.—One of the first migrants to appear, as I have seen it on February 22. After remaining two or three weeks these early birds seem to pass on to the north and none are seen until about the first of May when others, apparently the birds nesting here, arrive. Breeds sparingly about the lake, more commonly on the Coeur d'Alène and St. Joseph Rivers.

Sturnella magna neglecta.—Arriving early in March, the Meadowlark is very common during the summer. I found it nesting at the summit of Mica Peak.

Icterus bullocki.—Breeds sparingly in cottonwoods along the river, especially after it enters Spokane prairie.

Scolecophagus cyanocephalus.—A few pairs breed in bushes along the river bank near the fort. Occasionally a small flock may be seen about the stables throughout the winter.

Coccothraustes vespertinus montanus.—I am somewhat uncertain as to the true status of this species at Fort Sherman. Mr. Shallis, a local collector, informs me that it usually occurs from May to July and that it is absent during the rest of the year. In 1895 I did not observe any but Mr. Shallis, who knows the bird well, told me that he saw three small flocks about the middle of August. This Grosbeak was first seen by me on May 28, 1896, though their loud whistling notes had been heard a few days earlier. June 1 many were seen in pines and firs across the river, in twos and threes and in irregular flocks; they were restless, whistling constantly, and kept high up in the trees. Common during the next few days, they were scarce but not absent from about June 10 till early in July, when they were again common in small flocks, which at first consisted exclusively of males, joined soon after by females and young. They were now quite tame, coming about the houses and feeding much on the ground, permitting a close approach. I was absent from July 29 until

August 19 and saw none after my return. It is probable that this bird is a common but irregular summer visitor, nesting in the high pines and firs in the hills surrounding the lake, to the borders of which many return as soon as the young are fledged.

***Carpodacus cassinii*.**—Arriving about the middle of April, this fine songster is one of the most abundant summer birds at Fort Sherman, breeding commonly about the houses as well as on the surrounding hills.

***Loxia curvirostra minor*.**—As before stated, the occurrence of the Crossbill at Fort Sherman is irregular; they are sometimes as common and fearless as the English Sparrow. I have seen them in the fort every month in the year, but in summer most of them are in the neighboring hills. On warm bright days in February and March their pleasing song may be heard in every direction, and I have been informed that their nests with eggs have been found here in the former month, placed in tamaracks at a height of thirty or forty feet from the ground. The heavy pines and firs collect and shed the snow to a considerable extent, often leaving a bare spot around the base of the trunk while between scattered trees the snow may be one or two feet in depth. In these bare places, early in March, I have watched male and female Crossbills collect building material, both pine needles and dead grasses, a constant habit being to do this at a considerable distance from the nest for they always carried their loads out of sight, though I have watched them, for several hundred yards when the woods were open enough to permit this. During the latter part of summer there is a marked resumption of their song as heard in early spring. Mr. Brewster informs me that specimens taken here are typical of the former subspecies *bendirei*.

* ***Leucosticte tephrocotis littoralis*.**—There is a specimen in a small collection of birds in the local post office. Apparently an irregular fall and winter visitant, known to many of the settlers from its tameness and presence about farm yards. None were seen during the winters of 1894-95 and 1895-96, although careful search was made by myself and others. On November 3, 1896, a flock of about fifty was seen on a hillside near the fort. None were obtained, but they once flew very near to me and they were certainly not *L. atrata*, which Dr. Merriam found in the southern part of the State.

* ***Acanthis linaria*.**—A regular winter visitor, but varying greatly in its abundance. Their numbers are much increased about the middle of March by arrivals from the South. I have seen them as late as April 11.

***Spinus tristis*.**—A fairly common summer resident.

***Spinus pinus*.**—Resident. In summer it occurs quite commonly on Mica Peak, from about 1500 feet above the lake to the summit.

* ***Plectrophenax nivalis*.**—An irregular winter visitor, sometimes occurring on the prairies in large flocks.

* ***Calcarius lapponicus*.**—A single specimen taken November 13, 1896.

***Poocætes gramineus confinis*.**—Breeds sparingly.

***Ammodramus sandwichensis alaudinus*.**—Arriving early in May, it

passes through in moderate numbers, a few remaining to breed on the prairie. In September and early in October it is very common, especially so on the marsh.

* *Ammodramus leconteii*.—A specimen taken on the marsh September 28, 1896. It arose from tall marsh grass and alighted on a neighboring swamp willow, from which a hasty shot dropped it; great was my surprise to pick up a Leconte's Sparrow. I do not think it has previously been taken west of the Rocky Mountains. Careful search on several subsequent days in the same locality failed to reveal other specimens.

Zonotrichia leucophrys intermedia.—Fairly common in spring and fall.

Spizella monticola ochracea.—Rare in winter.

Spizella socialis arizonæ.—Arriving about the last week in April, this Sparrow is one of the commonest summer birds.

Junco hyemalis connectens.—Arrives during the last week of February or early in March, many returning from the north about the middle of September. On April 3 a small flock was observed near the top of a large pine tree; they were searching for insects near the ends of the branches, assuming the various attitudes of Titmice for which, although having watched them for some time, I mistook them until one was shot and picked up.

* *Melospiza fasciata merrilli*.—This new subspecies¹ is a common summer visitor at Fort Sherman, frequenting the shores of the lake and inflowing rivers, and following the smaller streams up to their sources in the surrounding hills. Careful search during two winters failed to reveal the presence of this bird, yet I am inclined to think that a few do pass that season here in favorable localities; and that while the great majority certainly do leave on account of the great depth of snow, their migration is a short one to the southwest, where in eastern Washington and Oregon the snow fall is much less and food more easily obtained in winter. I have seen one as late as December 10, and have heard their song as early as the last week in February; by the middle of March they are fairly common. There is nothing in their notes or general habits to distinguish them from the Song Sparrows of other parts of the country, but their partiality to the immediate vicinity of water is very marked, and most of the nests found during the seasons of 1895 and 1896 were in bushes growing in water. In 1896, a cold, backward season, a female taken April 24 had deposited her eggs and was incubating; and on May 25 a brood of fully fledged young was seen.

All the nests I have found were above the ground, one reason for which is probably the great rise of water in the lake and rivers about nesting time, a rise that yearly destroys many nests of this and other low building species. Various kinds of bushes, and sometimes small trees, are selected as suitable building sites for the nests; sometimes in the dense top of a wild rose on the river bank; sometimes in

¹ See Auk, XIII, p. 46.

bushes growing in water; a favorite place is among the debris lodged in a bush during high water of the previous year, where the nest is admirably concealed and readily escapes notice. Two nests were found in young cottonwoods where a cluster of small branches grew out from the main trunk. The nests, in whatever situation, are unusually large for a Song Sparrow and composed chiefly of dead leaves and strips of cottonwood bark, deeply cupped and lined with finer materials of the same general kind. The thirty-two eggs collected appear to average a trifle larger than those of other subspecies of the Song Sparrow, and are more uniformly greenish in their general appearance. Two broods are raised; five is the usual number of eggs in the first, three or four in the second. As soon as the young are fledged these birds leave their nesting haunts along the river and are to be found among the willow thickets on the marsh.

** Passerella iliaca schistacea.* — A rare migrant, taken in May.

Pipilo maculatus megalonyx. — Arriving in April, this bird is generally but sparingly distributed during the summer.

Zamelodia melanocephala. — Not uncommon. While examining a nest with eggs on June 25, the male alighted on the bush and sang almost continuously while I was there.

Passerina amœna. — Not common.

Piranga ludoviciana. — Arrive during the last week in May and are quite common among pines during the migration, though but few breed here. A nest found June 29 was in a small pine about thirty feet from the ground and about six feet from the trunk, on a branch so slender that it seemed as if the weight of the nest and sitting female would break it.

Petrochelidon lunifrons. — Common summer visitor, arriving about the last of April and leaving suddenly about the middle of August.

Chelidon erythrogaster. — Not observed about the fort or town during the breeding season but occasionally seen about ranches near the prairie.

** Tachycineta bicolor.* — Arrive from the middle to the end of March, according to the season, and breed abundantly in cottonwood trees along the lake and river, forming quite a colony at the outlet of the lake.

Clivicola riparia. — Many seen July 16 on the Coeur d'Alêne River, the low banks of which in places were perforated by their excavations. Seen only during migrations at the fort.

Ampelis garrulus. — An irregular winter visitor, taken in January and March.

Ampelis cedrorum. — Arriving irregularly in April and May, the Cedar Bird becomes quite common by the end of the latter month and remains until about the 20th of August. Unlike my previous experience with this species in the West, it is here very tame. Several nests were found in thorn bushes at the edge of the river; these were essentially alike in construction and as compared with eastern ones, rather loose and bulky.

They were composed externally of light colored strips of bark and flood debris, among masses of which they were placed — as are many of those of the Song Sparrow — and very well concealed. They were lined with the long black fibrous moss so common on pine trees in this region, interspersed with a few blades of dry grass, rootlets, and broken pine needles. One nest was built in a cottonwood sapling, and its exterior much resembled a nest of Swainson's Thrush, for which I mistook it until I saw the eggs.

Lanius borealis. — Common in the fall, arriving early in November. A few remain throughout the winter.

* *Vireo olivaceus*. — An abundant summer visitor, arriving about the 20th of May, and frequenting cottonwood and aspen groves in company with the next species, which it much exceeds in numbers. Several nests were found, all within six feet of the ground, in bushes or young trees among larger cottonwoods, in which the birds were to be heard singing throughout the day.

Vireo gilvus. — Arrives in May in considerable numbers and breeds somewhat sparingly.

Vireo solitarius cassinii. — Arrives about the 10th of May and is soon common in pine woods, to which it shows a marked partiality; breeds in moderate numbers.

* *Helminthophila rubricapilla gutturalis*. — Not uncommon during May, the song of the male being frequently heard on the hillside across the river. Breeds.

* *Helminthophila celata lutescens*. — Several specimens taken in May.

Dendroica aestiva. — Abundant during the summer, arriving early in May. Of many nests examined the majority contained five eggs or young.

Dendroica auduboni. — Arriving about the middle of April, Audubon's Warbler slowly increases in numbers, and by the first of May is common. Many pass through during this month, but not in such numbers as I have seen in other parts of the Northwest, nor does it breed here very commonly. It was not more plentiful on Mica Peak than at lake level. Early in August the fall migration is noticeable and by the 10th is usually well marked, continuing until the end of September. Elsewhere I have found Audubon's Warbler very partial to coniferous trees, and nesting in them almost exclusively. Here a majority of the nests I found were in deciduous trees and bushes, generally but a few feet from the ground. One was in a small rose bush growing at the edge of a cut bank overhanging a road where wagons daily passed close to it. Such nests as were found here, while varying considerably as to exterior, agree in having a lining in which black horse hairs are conspicuous, and in which feathers are loosely attached, not well woven in as is usual in most small nests. Occasionally one was seen in deep woods by the roadside near where hay had been brushed off a load on a passing wagon; this was utilized for the entire nest except lining, making a conspicuous yellow object in the dark green fir or pine in which it was placed.

**Dendroica townsendi*. — During the spring of 1895 I frequently heard the note of a *Dendroica* that I could not identify, though much time was devoted to this end. Two or three males were to be heard daily in their respective ranges, which were among large firs growing on the hillside across the river. They seemed to haunt exclusively the tops of these trees, flitting from one to another at such a height as to make their identification by sight impossible, and their capture a very difficult matter. They were active and restless, passing rapidly from tree to tree along the hillside for a few hundred yards and returning over the same route, this habit being observed at all hours of the day. The few shots obtained were at such distances as to be ineffectual. The birds were evidently nesting, the song gradually diminishing in frequency until the end of June when it ceased.

On May 21, 1896, it was again heard and almost daily subsequently. At last, on June 2, a lucky shot brought down a fine male *D. townsendi* which, although not in the act of singing when shot, is, I have little doubt the author of the song. This usually consists of five notes—*deè deè deè — deè deè* all, especially the first three, uttered in the peculiar harsh drawl of *D. virens*. Later in the season this song changes somewhat at times—at least I think that both are uttered by the same species—and on June 29, I shot a male in the act of singing this later song, and a few minutes later his mate. Their nest was evidently near as they scolded me with the usual *Dendroica* *chip* of alarm, and the abdomen of the female was denuded. These two birds were among a low growth of firs and pines and were shot without difficulty.

Geothlypis macgillivrayi. — Arrives about the middle of May and breeds rather commonly.

Geothlypis trichas occidentalis. — Arrives in May, and breeds sparingly. Common in the marshes in September.

Sylvania pusilla pileolata. — Taken occasionally in spring and autumn.

Setophaga ruticilla. — Abundant summer visitor, arriving about the last of May.

Anthus pensilvanicus. — Decidedly rare in spring, a few passing through about the middle of May. In the autumn they are very abundant, returning about the first of September, and a few lingering until early in November. At this season they frequent the dry, open prairies as well as the marshes about the lake, where they gather in large flocks.

Cinclus mexicanus. — Fairly common along suitable streams flowing into the lake.

Galeoscoptes carolinensis. — Common summer visitor.

Salpinctes obsoletus. — A pair found July 2, among the rocks on the summit of Mica Peak, where they were evidently nesting.

**Troglodytes ædon parkmanii*. — Breeds rather commonly. Mr. Brewster informs me that Fort Sherman birds are nearer to *parkmanii* than to *arcticus*.

Troglodytes hyemalis pacificus. — Rather common resident; found in

suitable localities at all seasons. A series of skins sent to Mr. Brewster were pronounced by him to be "ultra typical," being darker than birds from the Pacific coast.

Cistothorus palustris paludicola. — Rare in autumn, among long grass and swamp willows in the marsh. None appear to breed at this end of the lake.

Certhia familiaris montana. — Abundant during winter. This is the only part of the Rocky Mountain region where I have found this species to be other than uncommon. During the month of April they gradually disappear, and only one was seen near the fort during the breeding season. It was not observed on Mica Peak, though it might easily have escaped notice; nor were any seen until about the middle of September, when they again appeared in company with Kinglets and Chickadees. While watching a Creeper one day at a distance of a few feet it suddenly flew and alighted on my leg for a second or two.

Sitta carolinensis aculeata. — The least common of the three species of Nuthatch, and usually associating with the Pygmy, but is by no means rare. Breeds rather sparingly about lake level and in the hills.

Sitta canadensis. — A common winter resident, breeding less plentifully near the fort and among the surrounding hills. Local specimens have unusually long bills.

Sitta pygmæa. — Probably the most abundant resident bird at Fort Sherman, in winter gathering in flocks with the other Nuthatches, Titmice, and Kinglets. Each year one or more pairs placed their nests within the weatherboarding of some of the buildings within the fort, entering through knotholes in the boarding. White-bellied Swallows, Wrens, and Western Bluebirds also did the same.

* *Parus atricapillus*. — A common resident. Its favorite breeding locality is among the swamp willows on the marsh, where a number of pairs gather each year, nesting in dead willow branches, sometimes scarcely three inches in diameter, and but little above the surface of the water.

In regard to the identification of this species Mr. Brewster writes me as follows:

"After carefully examining your series of Black-capped Titmice from Fort Sherman and comparing them with all the material contained in the National Museum, as well as in my own collection, I have come to the conclusion that they must be referred — at least provisionally — to *Parus atricapillus*. They are of practically the same size and proportion as our eastern bird, save in respect to the bill, which usually — but by no means invariably — is shorter and more conical in shape. In coloring, also, they resemble true *atricapillus* very closely, but as a rule they have less white on the wings and tail, more brownish on the sides, and deeper, clearer black on the crown and throat. These differences, however, are comparatively slight and inconstant, and do not seem to me to entitle the bird to separation under a distinctive name. It is awkward, of course, to cite it as *atricapillus*, but I see no alternative. One thing is certain, namely,

that it is distinctly unlike either *occidentalis* or *septentrionalis*, despite the fact that it occupies a region lying between the respective ranges of these subspecies and far removed from the known western limits of the range of *atricapillus*."

Parus gambeli.—Abundant resident. Common in and about the fort in winter, most going to the adjacent hills to breed.

Parus rufescens.—This Chickadee is a fairly common resident in the vicinity of Fort Sherman, though more frequently seen in the hills than at lake level. Mr. Brewster informs me that local specimens are "identical in every respect" with skins from the coast of British Columbia.

Regulus satrapa olivaceus.—Common resident, especially in winter, most going up the surrounding hills to breed. A brood of fully fledged young seen at the fort on June 19.

Regulus calendula.—Arriving about the middle of April, this Kinglet is very abundant by the first of May. A large number pass through to the North, returning in September, but many remain to breed, and until the middle of June the song of the males may be heard in every direction.

Myadestes townsendii.—Not uncommon during the migrations, and I found one pair nesting near the summit of Mica Peak. It is an early migrant, arriving about the first of April, and I have taken a specimen as late as December 22.

* **Turdus fuscescens salicicola.**—Arriving about the twentieth of May, this Thrush is rather common among cottonwoods bordering the lake and river, where its sweet song may be heard towards evening. Nests found here were from two to seven feet above the ground, and in construction were essentially like those of the eastern form.

Turdus ustulatus swainsonii.—Breeds rather commonly about the lake and on Mica Peak up to the summit.

Merula migratoria propinqua.—Usually arrives during the last week in February and is abundant during the summer.

Hesperocichla nœvia.—First noted during the first week of March when quite a number of males were found on the hillsides across the river, and also among the thickets under cottonwoods at the outlet of the lake. In 1896 the first were seen on April 3. They were generally flushed from the ground among dead leaves and alighting on a branch, uttered their peculiar *cluck* which, among the dense underbrush or young pines, often first attracted attention to the birds' presence. None were observed in autumn, but their habits are such that they might easily escape notice, and I have little doubt that some breed at no great distance from the fort.

Sialia mexicana bairdi.—Arrives late in February or early in March and is abundant during summer. Some specimens taken here are, in coloration, nearer *occidentalis* than *bairdi*.

Sialia arctica.—Usually arrives a few days later than the preceding species, and is less common at lake level, but is more generally distributed and more common in the hills. One pair nested on the sheltered corner of a rafter on the hospital porch.

NOTE.— Since most of this paper was put in type, I have received from Dr. C. Hart Merriam some unpublished field notes on Idaho birds made since the appearance of his report upon the subject. He kindly allows me to make the following extracts in order to bring the lists up to date :

Sphyrapicus thyroideus.— New to Idaho. Sawtooth City, Mr. Evermann. Near Coeur d' Aléne, August, 1895; Messrs. Bailey and Howell. *Sayornis saya*.

Icteria virens longicauda.— Both recorded as common at Cœur d' Aléne. These three species are therefore to be added to the list of birds found in the vicinity of Fort Sherman.

I may say that early in 1897 about ten pairs of *Oreortyx pictus*, captured near Puget Sound, were liberated near the northern base of Mica Peak, and it was proposed to introduce the Bob White.

THE GREAT ROOSTS ON GABBERET ISLAND, OPPOSITE NORTH ST. LOUIS, MO.

BY O. WIDMANN.

For certain reasons, probably very 'mity' ones, the Martins (*Progne subis*) are anxious to leave, as early as possible, the narrow quarters in which they rear their brood, and to spend the night in the open air in company with others of their kind. The father absents himself from home at nights before the brood is fully fledged, and when the young are on the wing the mother, too, tries to steal away, but not until it is nearly dark, and when the darlings are safely lodged in the old quarters, and well fed. Of course the parents return with the dawn of day, long before the sun is up, to feed and lead them.

After about a week of practice in catching insects on the wing, the young need no more help from their parents and accompany them to the roost, but the whole family returns to the old home-stead early in the morning, to spend a few hours in play and merry-making. By and by these visits become shorter and shorter,

even irregular, and after the middle of August they cease altogether. To the casual observer the species may now become one of uncertain occurrence, but so much more certain and numerous are they to be found in the evening at their common roost. But where is the roost?

The experience of former years has taught us to look for it in the large willow tracts along the banks of the Mississippi; but it cannot remain long in the same place. The willows must be of a certain age and from ten to twenty feet high. At that period they form a heavy thicket, standing as close together as one sapling to every square foot. Of course not all of these can thrive for many years; many become sickly and succumb, leaving only the strongest to grow to trees. Therefore, if for no other reason, the Martins could not use the same tract for more than a few years.

Twelve years ago the roost was on Arsenal Island, ten miles below the present location; in the meantime it was above the city, near the mouth of the Missouri; the last two seasons it has been on Gabberet Island, opposite the northern end of St. Louis. The island is nothing but a long and narrow sandbank of extremely variable dimensions according to the stage of the river. The highest part, less than a quarter of a mile in width, and twenty to twenty-five feet above the low water mark, is covered by the willow thicket. During the flood of last spring the whole island was under water, but with the falling of the water during the summer an immense sandbank arose all along its western side, as well as at its foot, and continued growing until with a stage of three feet above low water in September it reached, in places, a width of a quarter of a mile.

On the east the island is separated from the Illinois shore by a narrow and shallow arm of the river, forming large mud flats in July and August, and drying up more and more, as the low stage of water continued through September and October. The highest part of the island, an area of about twenty acres, is where the willows stand thickest, and the number of Martins that resorted there nightly was beyond computation, especially during the latter half of August, when they were most numerous. After the first of September it became soon evident that they were on the

decrease, though still plentiful until a cool spell about the middle of the month, after which only a few hundreds were remaining, and the last were seen on the 24th. In July and August some of the Martins arrive in the vicinity of the roost as early as an hour before sunset, alighting on isolated trees along the shores, or soaring high above the island. Half an hour before sunset some begin to alight on the sandbank, preferably on parts lately exposed and still damp. From now on Martins are pouring in from all sides, sometimes in regular streams, some more or less high, others low over the water, on which innumerable splashes reveal their presence at long distances.

At sunset a glance over the sandbank reminds one involuntarily of a sheet of sticky fly-paper, well covered with flies, so thickly dotted is the sand with Martins on areas of ten to twenty acres in extent. After the sun has set the Martins leave the sand in detachments and begin to mass and revolve above the willows. During the following ten or fifteen minutes there is a constant flying up from the sand and a coming of new arrivals, which take their places on the sand.

While the host on the sand is getting slowly smaller, the cloud above the island grows fast and forms a whirling mass of excited birds, uttering low and short, though melodious, calls; everyone moving in circles of its own, but the whole cloud swinging hither and thither, now low, then high, now contracting, then expanding, sometimes almost disappearing in the distance, then rolling back again in an instant, only to enact another stampede in another direction.

About twenty minutes after sunset the first Martins descend into the willows. This descent reminds one of that of Swifts into a chimney. The revolving cloud becomes funnel-shaped, almost touching the treetops, and a number of birds drop from the funnel into the willows, while the rest of the birds sweep on, rushing out and scattering in all directions, but in a moment all are flowing back, and the performance is repeated again and again until all are down.

During the early part of the evening we notice hardly any other kinds of Swallows among the Martins, but after sunset, when they begin to circle, we become suddenly aware of the presence of a

number of Bank Swallows (*Clivicola riparia*). They arrive low over the water in large droves and immediately mix with the flying Martins, taking part in all their evolutions and manoeuvres, and their squeaky voices become soon prominent amidst the soft notes of Progne.

Just before dark the region along the water's edge is fairly swarming with new arrivals, and in the same degree as the descent of Martins progresses, the proportion of the little Bank Swallows increases until toward the end they constitute the majority of the whirling birds. A few troops even arrive after all are down behind the willow tops, when night is getting ready to cover the island with her protecting wings. But even now are the roosting birds not yet at rest, and there is considerable stir and commotion going on among them. Numbers of restless birds are fluttering among the willow tops, apparently exchanging uncomfortable perches for more desirable ones, and a strange, confused noise is heard.

Martins and Bank Swallows are now sitting promiscuously in the upper branches of the willows, often half a dozen in one treetop and several on one little branch. This good-fellowship lasts throughout the season from the time they leave the nest till their common departure in September.

Swallows belong to our most sociable birds; not only do they vastly congregate among themselves, they also associate with other birds of gregarious habits, especially Blackbirds.

Since the feeding habits of the two families differ widely, the only opportunity for their association is to be found in the roost, and our great Gabberet roost bears splendid witness of such an affiliation, for the same willows that harbor the Martins and Bank Swallows are the nightly resort for thousands of Bronzed Grackles and Cowbirds.

There are plenty of Grackles' roosts scattered over the country, and they are a common occurrence in the larger river bottoms, but the arrival of the big flocks on the island in the evening is nevertheless a very pretty sight and an acceptable prelude to the grand spectacle to follow. They come to the roost pretty early in the evening, when the sun is yet above the horizon, and all the flocks that come from the Missouri side invariably

cross the river at the same spot, flying at a height of several hundred feet until near the island when they swoop down and in a bold curve, almost touching the water, rush over the sandbank and enter the willows at once. Here they begin their usual concerts, and the din of their unmelodious voices may, at a distance, be likened to escaping steam.

Of infinitely more interest than the Grackles are their relatives, the Cowbirds, because, like the Martins, they make themselves interesting at this particular season by their absence from most places where they were common a short time before. That this pronounced socialist and plebeian seeks the company of the aristocratic, high-born, purple-robed Martin may be a fact; the association seems to be intentional, not accidental. Years ago, when on Arsenal Island, the Cowbirds were with them; willow tracts are plentiful along the river, but our Cowbirds choose now that on Gabberet, the one in which the Martins roost. And they do not only roost together in the same thicket, they also visit the same sandbank before retiring.

The Grackles fly directly into the willows, but the Cowbirds, which also arrive in large, unmixed flocks, after alighting at the edge of the willows, come down upon the sand and stay there a few minutes. While the Martins keep more to the water's edge, the Cowbirds prefer the vicinity of the willows, into which they retreat at the approach of danger. In some spots they actually mingle, but the Cowbirds never stay long and have all retired before the Martins descend. Though they are all Cowbirds, no other Blackbirds among them, they show, at this time of molting, such a great variety of dresses, that it is hard to believe they belong all to one species. There are some old males in fine feathers with the chocolate head, but there are others with the chocolate entirely replaced by light gray in sharp contrast with the black of the rest of the body. This is a very striking dress; but there are many others much quainter, though not easily describable, where gray, in some almost whitish, blotches occur irregularly on different parts of the body, which has already assumed the glossy black of the adult male. Then there are the different shades of brown, gray and buff of the old and young females in different stages of molt. The Cowbirds are fre-

quenters of the roost for the same period as the Martins, beginning early in summer and deserting it, with the last Martins, about the middle of September.

About a mile north of this great roost is the Crow's roost, where the Crows of the neighborhood, some 400-500, congregate all summer and form the nucleus of a much larger gathering later in the year.

The mud flats which separate the island from the Illinois mainland are the favorite feeding grounds of the Killdeers (*Ægialitis vocifera*), Spotted, and Solitary Sandpipers (*Actitis macularia* and *Totanus solitarius*), and they roost on the large sandbank, where their voices are heard after nightfall. In daytime, as well as at night, they act as decoys for the hordes of northern Plovers and Waders, which are trooping down the great thoroughfare during August and September. On some days the mud flats are fairly swarming with the most interesting bird life, when Pectoral, Baird's, and Least Sandpipers (*Tringa maculata*, *bairdii* and *minutilla*) feed harmoniously with Semipalmated and Belted Piping Plovers (*Ægialitis semipalmata* and *Æ. meloda circumcincta*) in the same pools.

On September 7 the island enjoyed the visit of a distinguished guest, the Turnstone (*Arenaria interpres*), a lovely bird with a strikingly beautiful dress and melodious voice.

The two most interesting summer sojourners of Gabberet Island are the Song Sparrow (*Melospiza fasciata*) and the Least Tern (*Sterna antillarum*). The former finds here his most southern record for this section of the country, and the latter is remarkable for his good luck in escaping so long the notice of the egg-hog and pot-hunter in close proximity to a big city. The high water of early summer retarded nesting so much that the young were still begging for food in the latter part of August, and the species remained until the second week in September.

THE BREEDING OF THE CAROLINA PAROQUET
IN CAPTIVITY.¹

BY DR. NOWOTNY.

AT THE end of October, 1878, I bought a pair of Carolina Paroquets in Vienna. At first they were foolishly shy and very much worried, dashing about and huddling together. Soon, however, by quiet, gentle treatment, they became tame, the female sooner than the male; and in three months I had succeeded in taming them to such an extent that both would take to my hand, the female would fly on my head, and both would take their food from my hand or mouth. Gradually they became tamer, and now they fear me very little; and when I return from some trip, they fairly bow, rejoicing, and at the same time raising up their wings. At first their noise was often unbearable, but this has changed completely. Since the close of their breeding period they seldom scream; I hear only faint, pleasing sounds or angry notes from the female, at times a short call or cackling during copulation. Before and during the breeding period they were passionately fond of chewing up soft wood, especially limbs of poplar as thick as a finger. Every day a perching stick of soft wood one and a half times the thickness of a finger was destroyed. The female was the destroyer, the male being less destructive. This, too, has now changed, but I dare not allow them to remain unwatched when I open the cage (which is done every forenoon). The perch is not molested, but the curtains, wall paper, doors, windows, and the like are not safe from the attacks of the female. The male destroys nothing.

They are very fond of music. When my wife places the zither table near the cage in the evening, lights the lamp and begins to play, then rejoicing, headraising, bowing and wing beating takes place without measure. Similar pleasure was expressed by both when we lit the Christmas tree, December, 1878. The male is

¹ Translated for 'The Auk' by PAUL BARTSCH from *Die Fremdländischen Stubenvögel, ihre Naturgeschichte, Pflege und Zucht*, by DR. KARL RUSS, Vol. III, pt. 10, pp. 838, *et seq.*

more virtuous than the female. He possesses only good qualities. The female pilfers, is jealous of my attention, jealous of food, and curious. When I hold a hand mirror before her and then move away she flies after it and upon it and gazes at her own picture with great interest. They are both very susceptible to praise. They know exactly whether I praise, threaten, or reprimand them, and fly into the cage as soon as I raise my hand, at times, however, with slight resistance. In the cage they are more confident than they are outside, and permit themselves to be taken by the feet, to have their heads scratched, and allow me to play with their bill with my finger, etc.

As to food, they like variety. I have tried many things, and found that they love to eat occasionally hemp, oats (this they preferred shelled), sunflower seed, senegal, glanzsamen [*Phalaris*?], bechnuts, seeds of *Pinus abies*, rice (especially in the ear), maize (especially half ripe), bread, the soft parts of light bread, but only when fresh, and not old, and soaked in water or milk; also many kinds of berries, as berberitzen [*Berberis vulgaris*], schlehen [*Prunus spinosa*], weissdorn [hawthorn], etc. Tidbits for both are the seeds of *Pinus cembra*, fresh cherries, grapes, and rose pods. They are especially fond of the fruit of *Thuja*, but most of all they love the fruit of the sycamore (*Platanus*); with these I have been feeding them from August until now (December), and they do not tire of them. As soon as I enter the room with these, they leave all other food and fly toward me at once, the female perching on my head, the male on my hand, from which he takes the food and flies away with it. The other ball I then give to the female; and now they clean them completely with great zest. I have, however, never been able to observe them swallowing anything, although they whet their tongue on the pulled off material. They may eat and waste burdock, apple seeds, maize, and wheat in their native haunts when forced by hunger; mine refused all these, as well as spinach, lettuce, and other vegetables, also white millet, fruit, ant larvæ, and red millet.

In February, 1879, I desired to allow them to nest. They entered the breeding box, and became more shy, but soon the box was demolished, although made of hard wood. As they made no attempt at nesting, I removed the breeding box after about two

weeks. On May 22, 1879, I separated them, and placed each in a separate cage. This caused much lamentation. May 24 I hung another breeding box in a new square tinned cage; the edges which were turned toward to the cage, as well as its opening, were capped with tin. I lined it with wood shavings mixed with insect powder. I placed the cage, as well as the breeding box, in a gloomy place, and the pair soon became reconciled. On June 17 I noticed a sagging on the female; from this time until the beginning of August she ate much mortar in the morning before she touched food, preferring this to sepia, which she only bedaubed; she also eagerly crushed limbs of poplar (less so those of willow, and other kinds not at all), but scarcely touched soaked feed and ant larvæ. During the entire breeding time she favored the above mentioned food. She lost many feathers from the 17th to the 29th of June, almost daily two or three large ones, and on the 28th of June eight ventral feathers. On June 29 I found two eggs on the bottom of the cage (not in the breeding-box). Both birds sat outside of the box in the cage upon the perch. I placed the eggs in the breeding box, they watching. In the afternoon of the same day, the female sat on the bottom of the cage (the male beside her), having a third egg beneath her. I also took this and placed it in the box, where I found three eggs, four in all. On this day the female lost about twenty ventral feathers. On June 30 a fifth egg lay on the bottom of the cage, and this I likewise removed to the breeding box. At ten A. M. the female bathed her head, and both birds remained outside of the box, as well as the whole day of the 1st of July. This was very aggravating to me. I looked into the breeding box and found that all the eggs had been picked and sucked; very likely this was the first set. They were unable to effect copulation in the beginning, in January, which was now accomplished with ease. Between the 2d and 6th of July the female deposited two more eggs, these being the sixth and seventh. These I took away from them, as I was in doubt of good results, to have them hatched by a hen; they were destroyed, however, through carelessness.

On July 19 the female laid another egg, and soon after, I do not know when, a ninth and tenth. These three were deposited in the breeding box and now both birds sat on them assiduously,

especially the female who was never seen to leave the box. On August 9 I heard a young one scream, and on the 10th two were calling; I do not know when the third was hatched. On the 6th of September I found the smaller of the three young ones on the floor of the cage. I returned it to the breeding box. Soon after I saw the larger one lying on the floor. It is very likely that the old birds had thrown them out of the box. I now removed the nesting box entirely, thinking that the parents did not wish to have them in there and fearing that, if I left them on the floor of the cage and allowed the box to remain, the old ones would remain in it and leave the young ones to perish. I therefore constructed a nest of wood shavings for them on the bottom of the cage and placed both young ones on it (the third one had died in the meantime, perhaps of starvation). The old ones immediately sat near them and fed them well until the 17th of September.

On this day we departed from Vienna for Meran. The two had already attained green wings and tails; the older one also had red feathers above the bill and on the under parts. I placed all four in a transportation box supplied with shavings, and did not allow them to leave my hands during the entire trip, which, however, only lasted twenty-four hours. They arrived very well in Meran, but, alas! the parents refused to feed the young. I now fed them with shelled hemp, light bread and shelled and cut sunflower seed. All seemed well, but on the morning of the 23d of September the younger one appeared as if dead. We warmed it and fed it but the feet remained lax and motionless. At night it was dead. It had a yellow blister in the throat. The oldest one was lively and well. It moved about in the sun and ate heartily. But on the eve of the 24th it was taken sick, presenting similar symptoms, and also died. The old ones remained well; they mated again on the 2nd of October.

My female does not differ from the male either in the color of the inner vane or in the distribution of the orange red; I have only noticed a difference in the fact that its head is round, while that of the male is somewhat flattened; further differences can be noted in their ways, eyes and manner, which cannot be described. The oldest young one had already attained many

dense strong red feathers above the bill at the age of eight weeks. It was very tame at this age and when I placed it on the ground and walked away ten steps, it followed me and crawled upon my shoe. It partook by itself of the offered food. The old birds are very devoted to each other and are always together, and if one flies away the other follows immediately. They stand cold very well, but enjoy having their under parts touched by warm breath, for which purpose they cling to the wires and permit me to breath upon them, pecking me on the nose tenderly at the same time. In the cage I can play with them as I wish and even take them in my hands, but I dare not grasp or close the hand, for then they slip away at once, screaming.¹

DESCRIPTION OF A NEW *AMAZILIA*.

BY HARRY C. OBERHOLSER.

A COMPARISON of specimens of *Amazilia cerviniventris* Gould, from Texas, with examples from the State of Vera Cruz, Mexico, seems to indicate that there exist two geographical races of this species, one of which is without a name. As the type of *A. cerviniventris* came from Cordova, Vera Cruz,² it is proposed to characterize the Texas form as

Amazilia cerviniventris chalconota, subsp. nov.

CHARS. SUBSP.—*Amazilia A. cerviniventre affinis, sed abdomine crissoque conspicue dilutioribus; notae paulo magis aureo tincto.*

Al., 52–59 (55.2) mm.; caud., 31–38 (33.9) mm.; culm. exp., 20–22 (21) mm.

Habitat.—Valley of the Lower Rio Grande, with the coast region of southern Texas, north to Bee County, and south in winter into eastern Mexico.

¹Carolina Paroquets have been living in the Zoölogical Garden at Frankfort a. M. for ten to twelve years (according to the report of Dr. Max Schmidt).
—KARL RUSS.

²Gould, Proc. Zool. Soc. Lond., 1856, 150.

Description.—Type, male adult, No. 134941, U. S. Nat. Mus.; Beeville, Texas, May 29, 1894; F. B. Armstrong.—Upper parts bronze green, the cervix less golden; tips of coronal feathers broadly slate color, giving to the head a dingy appearance; feathers of the superior tail-coverts edged with chestnut. Wings dull, dark, metallic purple; tectrices, except the primary coverts, bronze green like the back. Tail chestnut, the two central rectrices greenish bronze, all the others externally margined, and the outer ones narrowly, the inner broadly, tipped with the same color. Throat and breast glittering green; central portion of abdomen ochraceous buff, lower tail-coverts somewhat darker; two pure white down tufts, one on either side of anal region, these almost wholly concealed by the contour feathers; flanks pale cinnamon rufous, mixed, especially on the anterior portions, with bronze green; under wing-coverts and axillars greenish bronze; edge of wing light cinnamon rufous.

From *Amazilia cerviniventris* this new subspecies may be readily discriminated by the much lighter color of the posterior lower parts, in this respect there being more difference than exists between true *Amazilia cerviniventris* and *A. yucatanensis*. Among the birds from Texas (16 in number) this character is quite constant. The upper parts are appreciably more golden in hue, although this can be regarded as only an average distinction, for some examples of *cerviniventris* are fully as golden bronze above as is *chalconota*. There seems to be little if any difference in size.

A specimen from Hidalgo, Tamaulipas, Mexico, on the Rio Grande, has the abdomen more deeply colored than the Texas birds; in fact, almost as dark as the palest examples of *cerviniventris*. It is thus rather intermediate between *chalconota* and *cerviniventris*, but is apparently nearer the former. A specimen from 'Mexico' (No. 38635, Am. Mus. Nat. Hist.) is quite indistinguishable from some examples of *chalconota*, and, although no date is attached, may very safely be considered a migrant and referred to this form.

Among the Texas specimens there is evident considerable individual variation, part of which is undoubtedly due to age. Some have the posterior lower parts much lighter than others, the type representing in this respect about the average. But even the darkest specimens are easily separable from typical *cerviniventris*. The extent of the bronze on the tail-feathers is quite variable. In one bird (No. 142258, U. S. Nat. Mus.) this color is much

reduced, for, with the exception of the extreme bases of the central feathers, and very narrow edgings to the exterior rectrices, the entire tail is chestnut. In some examples, as in the one just mentioned, this bronze green on the rectrices is partially or wholly replaced by a dark metallic purple, very like the color of the wing quills. Some specimens have the rufous margins to the upper tail-coverts much broader and more conspicuous, this being possibly an indication of immaturity, although in none of the birds examined is this marking entirely absent. The color of the upper parts presents quite an appreciable variation, being in some cases much less golden than in others. Owing to narrower slate colored edging of the feathers on the crown, that part in some specimens is very nearly like the back, although in many it is noticeably even duller than in the type. An individual difference is apparent in also the shade of the throat, some having the green much more yellowish than others.

This Hummingbird was first recorded from the United States by Dr. J. C. Merrill,¹ who captured a specimen at Fort Brown, Texas, in 1876. While it is at some places within our borders an abundant summer resident, its range seems to be quite restricted, for in very few of the numerous papers on the birds of Texas is any mention made of the species. So far as the present writer has been able to ascertain, there are in the State only four localities where *Amazilia c. chalconota* has been taken. These are Fort Brown, Brownsville, Corpus Christi, and Beeville. Of the last mentioned, which is the northernmost record, there appears to be no published account. There are available no specimens from the State of Tamaulipas, in Mexico, so that it is impossible to determine to which form the breeding birds from this region belong.

True *Amazilia cerviniventris* exhibits a range of individual variation similar to that existing in *Amazilia c. chalconota*. Only two of the specimens here referred to *cerviniventris* are with any difficulty to be distinguished from *chalconota*. One of these, from Tlacotalpan, Vera Cruz, is apparently an immature bird; and though somewhat intermediate in the color of the abdomen, seems

¹ Bull. Nutt. Orn. Club, II, 1877, 26.

be nearer *cerviniventris*. The other example is a female from the same locality, and was taken on May 28, 1894. So far as the color of its posterior lower parts is concerned, it can scarcely be separated from the darker examples of *chalconota*, though the lower tail-coverts are more like *cerviniventris*; but in view of the date and locality it would appear to be considered better as an unusually pale *cerviniventris* than as a belated migrant of *chalconota*.

One specimen of *A. cerviniventris* (No. 38634, Am. Mus. Nat. Hist.) is from Cordova, Vera Cruz, the type locality, and is one of the specimens obtained by Sallé, the collector of Gould's type specimens. It may therefore be regarded as typical of this form. The two darkest birds in the series are respectively from Coatzacoalcos and Tlacotalpan, Vera Cruz, but others from both of these localities are noticeably less deeply colored.

In *Amazilia yucatanensis* the posterior lower parts are almost ferruginous, quite different in appearance from the cinnamon rufous of the two dark Vera Cruz examples of *cerviniventris*; though in respect to the shade of this color, these latter more nearly approach *yucatanensis* than any of the other specimens now at hand. But the extension of bronze green over the breast and sides is very strongly indicated in these two birds, leaving no doubt of their correct identification with *cerviniventris*. Only one example from the *cerviniventris* series shows a marked approach to *yucatanensis* in the lateral extension of the green of the breast. This specimen (No. 155313, U. S. Nat. Mus.) is from Ocozucantla, Chiapas, Mexico, and was collected Aug. 19, 1895. At first sight it shows scarcely more green upon the sides than do the specimens of *Amazilia yucatanensis* examined, but upon close inspection this color is seen to extend as a very slight wash considerably farther back than in *yucatanensis*. Furthermore, this Chiapas bird is so very much duller and paler below than *yucatanensis* that its identity with *cerviniventris* can hardly be questioned. The evidence presented by the specimens above mentioned seems not sufficient to establish intergradation between *cerviniventris* and *yucatanensis*, and both are therefore here accorded full specific rank.

The author's thanks are tendered to Mr. Robert Ridgway for the use of the National Museum series of *Amazilia*; to Dr. C.

Hart Merriam for a similar favor with regard to the collection of the Biological Survey; to Dr. J. A. Allen and Mr. F. M. Chapman for the loan of material from the American Museum of Natural History.

MEASUREMENTS OF *Amazilia cerviniventris cerviniventris*.

	Wing.	Tail.	Exposed Culmen.
Average of ten specimens . .	55.1	34.9	20.7
Maximum	56	37	21.5
Minimum	53	34	20

MEASUREMENTS OF *Amazilia cerviniventris chalconota*.

	Wing.	Tail.	Exposed Culmen.
Average of thirteen specimens	55.2	33.9	21
Maximum	59	38	22
Minimum	52	31	20

TWO NEW BIRDS FROM THE PACIFIC COAST OF AMERICA.

BY A. W. ANTHONY.

Anous stolidus ridgwayi, subsp. nov. RIDGWAY'S NODDY.

Subsp. char.—Much darker and less brown than *A. raussani*, resembling in this respect *A. galapagensis*, from which it differs in much paler cap.

Type No. 8220, collection A. W. A., Socorro Island, Mexico, May 5, 1897. Chin, throat, neck, and chest uniform deep brownish slate, but darker on the lores and above the eyes. A small white spot on the

upper posterior border of the eyelid. Lower lid white for nearly its entire length. Cap delicate pearly gray, almost silvery white on the anterior portion, in some lights gradually blending with color of nape on the occiput. Rest of plumage deep slaty brown; primaries blackish. Wing, 263 mm. Tail, longest feather, 160; graduation, 53; culmen, 40; depth, 11; tarsus, 25.

Hab., Cocos and Socorro Islands, Pacific Ocean.

Named in honor of Mr. R. Ridgway, whose notes on the Cocos Island birds (*Birds of the Galapagos Archipelago*, p. 645) first called my attention to this undescribed form.

Ridgway's Noddy was nesting in abundance on a small rock almost a mile west of the western end of Socorro Island. After several unsuccessful attempts, a landing was made at the risk of life and limb, and a series of eggs obtained. They were all laid on bare rock without any attempt at nest building; often placed on protruding shelves but little wider than the egg, and how they escaped rolling off into the sea is a mystery. Nearly all of the eggs taken May 12 were fresh, though several downy young ones were seen, together with the hundreds of young Sooty Terns (*Sterna fuliginosa* var. *crissalis* Baird) that swarmed all over the top of the rock. The Noddies were not seen at San Benedicte Island, 35 miles north of Socorro, nor at Clarion Island, 240 miles west.

***Oceanodroma kaedingi*, sp. nov. KAEDING'S PETREL.**

Sp. char. — Similar to *O. leucorhoa*, but much smaller with much less deeply forked tail. Type No. 8718, coll. A. W. A. At sea near Guadalupe Island, Lower California, July 25, 1897.

General plumage sooty black. Head and neck more plumbeous, greater and median wing-coverts pale sooty brownish. Longer upper tail-coverts white with black shafts. Lateral lower coverts edged with white. Rectrices sooty black, to base.

Wing, 145 mm.; central rectrices, 73; lateral rectrices, 83; tarsus, 21; middle toe and claw, 20; culmen, 15.

Hab., from Socorro and Clarion Islands to Southern California.

There seems to be considerable variation in the extent of the white on the upper tail-coverts in the series before me. A few have the coverts black with whitish patches on the sides, while one has totally black coverts but is otherwise similar to the white-

rumped birds. A parallel example is found in a large series of *O. socorroensis*, the type of which has whitish patches on the sides of the rump (lateral upper coverts). In a series of over 100 skins I only found about 3 per cent. so marked. A few are nearly as white on rump as true *leucorhoa*, but the largest part of the series, fully 95 per cent., have sooty black coverts above and below. Two or more species might easily be made from the series, but unfortunately the light rumped birds are found in the same burrows with the other birds.

FOUR SEA BIRDS NEW TO THE FAUNA OF NORTH AMERICA.

BY A. W. ANTHONY.

DURING the past spring and summer the following species were noted between San Diego and Cape San Lucas. All are new to our fauna and one, at least, *Phaëthon rubricaudus* is a decidedly unexpected addition to our birds.

On March 17, between San Geronimo Island and Guadalupe Island, a small white-bodied Albatross several times circled about the schooner but left us before any one could obtain a shot. Half an hour later it reappeared and was killed proving to be an adult specimen of *Diomedea immutabilis* Rothschild, described from Laysan Island, between Hawaii and China.

In April, 1887, I saw a white Albatross within five miles of the spot where the above specimen was taken, and the following year two were seen off San Quentin, fifty miles further north. As none were taken the identity is in doubt but I am inclined to think they were the present species.

About Cape San Lucas *Puffinus auricularis* Townsend, was fairly common April 23, and again in early June. Associated with them were two species, one of which agreed very well with

the descriptions of *P. bulleri*, but as none were taken it would be unsafe to venture an opinion as to its identity. The second species was seen again about San Benedicte and Socorro Islands where it was nesting. It proved to be *Puffinus cuneatus* Salvin, heretofore known only from the Bonin Islands south of Japan, Krusenstern Island, and the Hawaiian Islands.

On July 23, a Red-tailed Tropic Bird, *Phaethon rubricaudus*, was shot a short distance north of Guadalupe Island, thus adding the third species of the genus to our fauna. The Red-tailed Tropic Bird has, I think, heretofore been known only from the South Pacific. Whether it is of regular occurrence in our southwestern waters will be ascertained when we have a better knowledge of the pelagic species of this little known region.

SYRNIUM OCCIDENTALE CAURINUM, A NEW
OWL FROM THE PUGET SOUND REGION.

BY C. HART MERRIAM.

IN THE last edition of the Check-List of the American Ornithologists' Union (1895), and the second edition of Ridgway's 'Manual of North American Birds' (1896), California is given as the northern limit of range of the Spotted Owl, *Syrnium occidentale*. But in 'The Auk' for January, 1893 (Vol. X, pp. 17-18), Mr. S. N. Rhoads records two specimens from twelve miles east of Tacoma—a locality, by the way, some miles distant from the alleged "western foothills of the Cascades." The only other Puget Sound specimen of which I have any knowledge was killed in the city of Seattle a year or two ago, and was obtained by Mr. Henry W. Hindshaw, who mounted it, for the Museum of the University of Washington, where it was recently examined by Dr. A. K. Fisher and myself.

On June 22 of the present year (1897), one of my assistants, Mr. E. A. Preble, killed an adult female at Mt. Vernon, in Skagit

Valley, Washington. A couple of months later I saw a specimen nailed up on a log cabin in the valley of the Soleduc River, at the north base of the Olympic Mountains, and about the same time (the last week of August) saw two living owls in the Olympic Mountains which I believe were unquestionably this species. Owing to the density of the forest and great height of the trees, owls, though common, are seldom seen in this region.

Comparison of the northwestern Spotted Owl with the type specimen of *S. occidentale* shows it to be a well-marked subspecies, differing, like so many birds of the same region, in darker and richer coloration.

Syrnium occidentale caurinum, subsp. nov.

Type from Mt. Vernon, Skagit Valley, Washington, No. 157473. ♀ ad., U. S. Nat. Mus., Biological Survey Coll. Collected June 22, 1897 by E. A. Preble. Orig. no. 344. Wing 320 mm., tail (middle feathers) 205 mm.

Characters.—Similar to *S. occidentale* but everywhere darker. In general the white spots and markings are smaller; the dark areas larger and darker. This is especially noticeable on the head and back where the white spotting is reduced to a minimum. The dark markings on the sides of the breast, flanks and feet are very much darker and more extensive than in *occidentale*. But perhaps the most striking difference is on the wings. The primaries are not only very much darker but the broad whitish tips have disappeared and are represented by an indistinct pale band mixed with a little whitish on the outer side of the vane and on some of the feathers a faint whitish terminal edging. The three or four pale bars nearest the tips of the feathers are also obsolescent.

THE TERNS OF GREAT GULL ISLAND, N. Y.,
DURING 1897.

BY J. HARRIS REED.¹

GREAT GULL ISLAND is the smallest of the group of islands situated at the eastern end of Long Island, and contains about

¹ Read before the Delaware Valley Ornithological Club, Oct. 21, 1897.

eleven acres. Its shape is long and narrow, with an irregular shore line, especially on the south side, and varies in width from about three hundred feet across its centre, to long narrow ends, making a total length of about three-quarters of a mile. The beach is rough and stony, and contains a great many large boulders scattered along the shore, especially at the east end, where they form, as it were, a broken reef reaching from the main land to the lighthouse, about a mile distant. At low tide these rocks stand well out of the water, and present a very conspicuous appearance, with their white caps, stained and streaked with the excrement of the Terns, from their constant use as resting places from year to year.

The main land rises abruptly from the beach, with a perpendicular bank, from ten to fifteen feet high; its surface is treeless, but is clothed with a coarse growth of grass and wild flowers, and a few small patches of shrubs or low bushes. Much interest has been taken during the last few years, in the protection of the colony of Terns, which makes this island its breeding grounds, and we are informed (*Auk*, Jan., 1897) that last year their numbers reached about seven thousand pairs of birds. The Lighthouse Board has been called upon to assist in this work, and the keeper of the light has placed rude signs at different points along its banks, with a notice prohibiting the disturbing of their eggs.

During the present year, the United States Government has ordered the erection of a fortification on this island, the work being contracted for by J. W. Hoffman & Co., of Philadelphia, Pa., who last April took possession of the island and made preparation for erecting the work. The plant consisted of a wharf on the north side of the island, about its centre, with a derrick thereon for the unloading of vessels. Five other derricks were also erected at different points on the island, for the construction of the work. Among the buildings erected, were a boiler house, storage house for the cements, tool house, blacksmith shop, oil house, steam concrete mixer, water tanks, cracked stone bin, hay shed and stable for a dozen horses, ice house, commissary, comprising a store, two dining-rooms, two wash rooms, and a kitchen, with sleeping apartments above, eight shanties for the accommodation of a hundred or more workmen, an office for the contractors,

and three shanties for the use of the Government engineers. A line of railroad tracks was also run from the wharf to different parts of the work, for distributing materials with the aid of a small locomotive. A small electric light plant was also run, for the accommodation of the night workmen. Piles of various kinds of materials were also scattered about the island, such as stone, sand, coal, lumber, etc.

The whole plant took up over one-half of the area of the island, leaving only a small portion of the two ends for the accommodation of the Terns, who were compelled to divide themselves into two distinct colonies of about one thousand birds each. In these crowded quarters they congregated and laid their eggs, some in the grass, while others took to the bare patches of sand and tops of the large boulders along the beach. No sooner had the workmen discovered this than they began collecting them for eating purposes, as fast as they were laid. This was principally done by the negroes and Italians, who provided their own meals, and I was told by them that in some instances as many as a dozen eggs were eaten daily, by an individual. A great many were also collected out of curiosity, which were blown and carried away as keepsakes. On one occasion, a New York man visited the island, and collected a large basketful, which he was permitted to take away with him, with a promise not to return again. The crews of the vessels which landed there also participated in this shameful work.

This wholesale robbery was kept up the entire season, and not a Tern's egg was permitted to hatch on the main land during the whole period; and but few, if any, escaped undisturbed among those which nested on the boulders. I would say that it was almost impossible for Capt. Henry P. Field, or any one else, to do any protective work, under the circumstances, this season, for most of the depredations were done about daybreak, before the officials were up. Discouraged with such a reception, fully one-half of the colony of Terns disappeared, probably to breed elsewhere, but about eight hundred birds remained until late in September when they disappeared after the line storm, which occurs at this season.

The Terns at all times seemed to be unsuspecting of harm, and could often be seen sitting on the guy ropes of the derricks about

the work, or flying to and fro overhead, keeping up their continual cries from sunrise to sunset. At low tide they congregated along the beach in search of food, or sunned themselves from the tops of the large boulders. I have observed them at times following up and feeding on the schools of mackerel, which is certainly a beautiful sight, reminding one, as they dodge about each other, of a kaleidoscope in rotation.

The five weeks which I spent on the island, from August 26 to October 1, inclusive, being after the breeding season had closed, my information has been carefully collected from a large number of persons whose statements I have no reason to doubt, and who were not only eye witnesses, but participants in the spoils.

I am also informed by good authority that the Government intends erecting another gun on the east end of the island; if such be the case, it will consume all the earth from the remaining portions of the island, to form the breastworks, which will virtually leave nothing of Great Gull Island beyond the fortifications, and will completely destroy it as a resort for Terns.

FIFTEENTH CONGRESS OF THE AMERICAN ORNITHOLOGISTS' UNION.

THE FIFTEENTH CONGRESS of the American Ornithologists' Union was held in New York City, November 8-11, 1897. The business meeting took place on the evening of November 8 in the 'Board Room' of the American Museum of Natural History. The public sessions, lasting three days, were held in the Library of the Museum.

BUSINESS SESSION.—The meeting was called to order by Vice-President Dr. C. Hart Merriam, in the absence of the President, Mr. William Brewster. Eighteen Active Members were present. The Secretary's report gave the membership of the Union at the opening of the present Congress as 679, constituted as follows: Active, 46; Honorary, 18; Corresponding, 68; Associate, 547.

During the year the Union lost sixty-two members — seven by death, thirteen by resignation and forty-two were dropped for non-payment of dues. The members lost by death were Heinrich Gätke¹, an Honorary Member, who died on the Island of Heligoland, January 1, 1897, aged 83 years; and Maj. Charles E. Bendire, U. S. A.,² one of the Founders, an Active Member, and a Councillor, who died at Jacksonville, Fla., February 4, 1897, aged 61. Also the following Associates: Capt. Platte M. Thorne, U. S. A.,³ who died in Rochester, N. Y., March 16, 1897, aged 59; Robert Hoe Lawrence,⁴ who died at Danville, Ill., April 27, 1897, aged 35; Charles Bill, of Springfield, Mass., who died in April, 1897; Louis W. Brokaw, who died at Carmel, Ind., September 3, 1897; and Robert A. Campbell of Phœnix, Arizona, particulars of whose death have not yet been received.

The report of the Treasurer showed the finances of the Union to be in good condition.

The officers of the previous year were all re-elected, with Mr. Ruthven Deane as a member of the Council, to fill the vacancy caused by the death of Maj. Bendire. Dr. Charles W. Richmond, Assistant Curator, Department of Ornithology, U. S. National Museum, was elected an Active Member, and eighty-eight new members were added to the list of Associates. As a direct result of the Audubon Society movement, creating a popular interest in the study of birds, more women than usual were elected to associate membership. The usual reports of Standing Committees were received.

PUBLIC SESSION. First Day. — The meeting was called to order by Vice-President Merriam. Dr. J. A. Allen read a letter from Mr. Morris K. Jesup, President of the American Museum, welcoming the Union to the Museum.

The reading of scientific papers began with one by Mr. Sylvester D. Judd on 'Protective Adaptations of Insects from an Ornitho-

¹ For an obituary notice, see *Auk*, XIV, p. 254.

² For an obituary notice, see *Ibid*, p. 253; also Memorial Address in the present number.

³ For an obituary notice, see *Ibid*, pp. 254-255.

⁴ For an obituary notice see *Ibid*, p. 342.

logical Point of View.' Remarks followed by Drs. Allen and Fisher, the author, and the Chair.

Next came a commemorative address prepared by Dr. J. C. Merrill, U. S. A., entitled 'In Memoriam: Charles Emil Bendire.' In the absence of the author, it was read by Mr. D. G. Elliot.

The third title was 'Summer Birds of the West Virginia Spruce Belt,' by Dr. William C. Rives. Remarks followed by Dr. Coues, Messrs. J. A. Dakin, S. N. Rhoads, and the author.

The opening paper of the afternoon session was by Frank M. Chapman, entitled 'Experiences of an Ornithologist in Mexico.' Remarks followed by Messrs. Elliot, Nelson, Oberholser, and the author. The members and visitors then repaired to the Lecture Room of the Museum, where Mr. Chapman illustrated the preceding paper by lantern slides showing characteristic scenes of the life-zones of the State of Vera Cruz. Mr. Chapman then gave an exhibition of lantern slides of 'Birds in Nature' from material contributed by himself and other members of the Union. This was followed by Professor A. S. Bickmore, with colored lantern slides showing recent advances in methods of visual instruction.

Second Day.—The meeting was called to order by Vice-President Merriam. The Secretary read a letter from the President, Mr. Brewster, who regretted that ill health prevented his attendance at the Congress.

Dr. Jonathan Dwight, Jr., gave, as the first paper of the morning, 'Is Uniformity in Local Lists Possible?' It was discussed by Drs. Faxon and Allen, Messrs. Baskett, Oberholser, and the author.

The second title was 'Auduboniana and other Matters of present Interest,' by Dr. Elliott Coues. The portfolio carried by John James Audubon in Europe and America, and the original MS. of the first volume of his 'Ornithological Biography' were exhibited by Dr. Coues. Two original bird-drawings by John Woodhouse Audubon, and some unpublished paintings of birds by Louis Agassiz Fuertes were also shown.

The next paper was 'Ten days among the Birds of Northern New Hampshire,' by Judge John N. Clark. Remarks followed by Mr. William L. Baily.

The fourth title was 'Some Notes on Liberian Birds,' by Harry C. Oberholser.

The first paper of the afternoon was 'The Great Roosts on Gabberet Island, opposite North St. Louis,' by Otto Widmann. In the absence of the author, it was read by Mr. Dutcher, who also remarked upon the paper.

The next title was 'The Terns of Gull Island, New York,' by J. Harris Reed. As the author was not present, the paper was read by Mr. Dutcher. Remarks followed by Messrs. Dutcher and Chapman.

The third paper, 'The Petrels of Southern California,' by A. W. Anthony, was read in his absence by Mr. Chapman. Remarks followed by Messrs. Chapman and Osgood, and Dr. Bishop.

Then followed a paper by Rev. H. K. Job, entitled 'The Northern Raven breeding in New England.' In the absence of the author it was read by Mr. W. H. Osgood.

Mr. Chapman gave further information regarding some of the slides shown by him on the previous day.

The fifth title was the 'Breeding Habits of the Common Robin in Eastern Massachusetts,' by Reginald Heber Howe, Jr. The author not being present the paper was read by Mr. Harry C. Oberholser. Remarks followed by Messrs. J. Newton Baskett and Louis Agassiz Fuertes.

Mr. Abbott H. Thayer, the eminent portrait painter, then gave an out-of-door demonstration of the underlying principle of protective coloration, in continuation of his remarks on the subject at the previous Congress. Mr. Thayer showed a pair of decoys with the belly part cut off, so that in lying on the cut-off side they represented crouching birds or mammals. He then repeated upon them the coloring which he had exhibited at Cambridge upon entire decoys (decoys poised a few inches above the ground). This, he said, was to more clearly illustrate what he stated in his first paper on protective coloration, namely, that the normal gradation of the sky's lighting is effaced *by the color gradation of the animal at every point*, the median dorsal line having the darkest markings, so that the gradation toward the white of the belly *begins close to this dorsal line*. Mr. Thayer placed the two decoys side by side on a plank, and covered one of them uniformly with the same dry earth which he spread about it on the plank, so that all of its visible surface and that of the plank on which it

lay were absolutely of one tint — monochrome; yet it was conspicuously visible at a long distance, because of its normal gradation of shading from the sky's light, although there was no underside visible to show a culmination of shadow. The other decoy he painted in imitation of a hare's or snipe's gradation, and so successfully that it became totally invisible at a distance of four or five yards. He explained that the statement in his first paper that not a feather of the upper surfaces of the woodcock and grouse had been artificially colored referred only to the feathers along the median dorsal region.

The skin of a cottontail rabbit was exhibited, showing a most perfect gradation from black hairs of the middle of the back and over the shoulders to the white of the belly.

This communication, in connection with that given at Cambridge a year ago, completes Mr. Thayer's admirable demonstration of his theory of the great underlying principle of protective coloration in animals.

In the evening an illustrated lecture on 'A Naturalist's Expedition to East Africa' was given in the large lecture hall of the Museum by Mr. D. G. Elliot before an audience of some 1200 persons.

Third Day.—In the absence of the President and both Vice-Presidents, the meeting was called to order by the Secretary. Ex-President Allen was made Chairman *pro tem*. Before proceeding to the reading of papers, resolutions were adopted thanking the Trustees of the American Museum of Natural History for a place of meeting and for other courtesies tendered to the Union; and to the Linnæan Society of New York for generous hospitalities extended to the Union during its Fifteenth Congress.

The first paper of the morning was by Edwin I. Haines on 'The Summer Birds of the Catskill Mountains, with remarks upon the Faunæ of the Region.' Discussion followed by Messrs. Elliot, Dutcher, and Batchelder, Drs. Coues and Dwight, and the author.

The second paper was 'The Terns of Muskeget Island, Mass.,' by George H. Mackay. In the absence of the author, it was read by Mr. Dutcher. Remarks followed by Mr. Fuertes.

The third title was 'Remarks on an Exhibition of certain

Laridæ,' by Dr. Elliott Coues. Discussion followed by Messrs. Dutcher, Elliot, Fuertes, and the author.

As the opening paper of the afternoon, Mr. William Dutcher, Chairman of the 'Committee on Protection of North American Birds,' read the report of his committee for the past year. The report is published in this number of 'The Auk,' and will be issued separately as a pamphlet for free distribution.

The next title was 'Remarks on a New Theory of the Origin of Bird Migration,' by Dr. J. A. Allen. Discussion followed by Dr. Coues, Mr. Dutcher, and the author.

Dr. Jonathan Dwight, Jr., showed a specimen of a Petrel (*Puffinus assimilis*) new to North America. Remarks followed by Dr. Coues.

An informal talk on the Gyrfalcons was given by Mr. Chapman, who exhibited specimens from Greenland and Labrador. Remarks followed by Dr. W. E. Hughes, who accompanied the first Peary expedition to North Greenland.

The Union then adjourned to meet in Washington, D. C., November 14, 1898.

JNO. H. SAGE, *Secretary*.

Portland, Conn., Nov. 30, 1897.

GENERAL NOTES.

Notes on the Egg of the Marbled Murrelet.—While collecting this season off the Alaskan coast in the Prince of Wales Archipelago, it was my good fortune to take an egg of the Marbled Murrelet (*Brachyramphus marmoratus*), the first I believe that is known to science. My headquarters at that time were at the Indian village of Howkan, on Long Island, near the open end of Dixon's Entrance. The birds had been very abundant all winter and by May had taken on their rusty summer dress. Females taken at that time plainly indicated that they were about to nest, the ovaries containing eggs nearly formed. A careful watch failed to reveal any nesting sites and on inquiring of the Indians about it, they told me that they had always supposed the bird to breed high up on the mountains in hollow trees; one old fellow declared he had found the young in such places. As I had previously noticed the birds flying about high overhead at dusk I resolved to look into the matter, and spent many hours searching for them in the woods, but without success.

One day, the 23d of May, an Indian boy came to the cabin and wanted to borrow my 'scatter gun' to shoot ducks. I gave him the gun and some shells, I also asked him to bring me back some 'divers' if he could. He returned in the afternoon with four Marbled Murrelets and said, in Chinook, that "he thought one had an egg in it," and suiting the action to the word, squeezed the bird's abdomen, and before I could prevent it I heard the egg break between his fingers. On opening the bird I found the remains of a large clear green egg spotted with black and brown, which I patched up the best I could and sent to the Smithsonian Institution.

By a promise of a reward for eggs I soon had all the Indian boys of the place after them. Many of the birds they got had incomplete eggs in them and others had already laid, but I never secured another perfect specimen.

The birds were in the channels the entire summer, and on August 5 I noticed the first young in the immature white plumage, and by the middle of October the old birds had also assumed the winter dress. — GEO. G. CANTWELL, *Juneau, Alaska.*

[The above mentioned egg, kindly sent to the National Museum by Mr. Cantwell, measures about 2.48 inches (length) and 1.38 (width). In shape it is elongate ovate. The color is a greenish yellow, with brownish violet and dark brown spots, the latter being larger at the base. — W. L. RALPH]

Gull Dick.—The American Herring Gull (*Larus argentatus smithsonianus*), known as 'Gull Dick' (see Auk, Vol. IX, p. 227; Vol. X, p. 76;

Vol. XI, p. 73; Vol. XII, p. 76; Vol. XIII, p. 78), was observed for the last time in the vicinity of the Brenton Reef Light-ship on April 7, 1896, making twenty-four summers the bird had passed in this immediate locality. Captain Edward Fogarty, at present in charge of the ship, has known Dick for ten years.

The failure of this bird to put in an appearance as usual in October, 1896, and his continued absence ever since, leaves but little doubt that he is dead, as are all the captains of the Light-ship except the present incumbent, Captain Fogarty. Having recorded this bird's movements while alive for several years past in 'The Auk,' I now feel called upon to record his probable demise.—GEORGE H. MACKAY, *Nantucket, Mass.*

An Uncommon Gull in Massachusetts.—On March 24, 1897, I received from Manomet, Plymouth, a specimen of the Glaucous Gull (*Larus glaucus*), shot several days before. It is in nearly full plumage, —creamy white all over, save for faint, indistinct markings of brownish on the wing-coverts and lower parts.—HERBERT K. JOB, *North Middleboro, Mass.*

Leach's Petrel at Lancaster, N. H.—October 1, 1897, a pair of Leach's Petrels (*Oceanodroma leucorhoa*) were seen on a small pond in this town; one of them was shot, and its skin is now in my possession. The bird was very fat, and it seems remarkable that it should be found here, at least 100 miles from the nearest coast.—F. B. SPAULDING, *Lancaster, N. H.*

The Redhead (*Aythya americana*) in post-nuptial Plumage in Autumn.—On November 10, 1896, I received from Walter I. Jackson of Havre-de-Grace, a male Redhead (*Aythya americana*) shot the day previous on the Susquehanna flats. This bird, for some reason, had failed to moult at the proper time, and appears in the old worn-out feathers characteristic of the post-nuptial period. All the feathers are very short, but those on the head and the tail-feathers show most abrasion, being reduced to less than one-half the usual length. Examination showed the bones perfect and the flesh normal, though without a particle of fat, indicating that the bird was not a 'crippler.' It was flying with the other ducks when shot.—F. C. KIRKWOOD, *Baltimore, Md.*

The Glossy Ibis in Western New York.—During the second week of October, 1897, J. W. Ware shot and killed a Glossy Ibis (*Plegadis autumnalis*) in the upper end of the harbor at Dunkirk, N. Y. I have examined the bird carefully and can vouch for its identity. It is an adult bird in excellent plumage, the chestnut and green being very pronounced.—H. D. KIRKOVER, JR., *Fredonia, N. Y.*

The American Egret at Maplewood, N. J. — On July 27, 1897, Mr. Alfred Brower, my cousin, shot two specimens of the American Egret (*Ardea egretta*) on his pond in Maplewood, New Jersey. They were both young birds, although full grown. — CHARLES C. OWEN, *East Orange, N. J.*

Virginia Rail killed by striking a Telephone Wire. — On September 8, a specimen of the Virginia Rail (*Rallus virginianus*) was found in a yard in the centre of Englewood, N. J. The bird was stunned and had evidently come in contact with a telephone wire. During the day it revived and when I received it the next morning was apparently all right, although occasionally it showed a weakness in the legs, accompanied by an apparent dizziness. It lived for several days, when it was killed and preserved. Several photographs were taken, which are of some value in showing natural positions.

The above is a rather curious incident, as the wire which the bird must have struck is only about fifty feet from the ground, and is in the centre of a town of some six thousand inhabitants. The night was perfectly clear, and it is very hard to account for the bird's presence there. One or two of these birds are killed every year on the Hackensack and English Creek marshes, but they are considered rare. — WM. P. LEMMON, *Englewood, N. J.*

Baird's Sandpiper (*Tringa bairdii*) on the California Coast. — I desire to put on record the capture of a male Baird's Sandpiper on the ocean beach south of Pt. Pinos, near Monterey, California, August 25, 1897. Noticing two birds larger than the rest in a small flock of *Tringa minutilla* flying past, I singled out and brought down one with each barrel. One proved to be a male *Arenaria interpres* and the other a male *Tringa bairdii*.

The only other record of the occurrence of this species in California that I have found is one in the 'Catalogue of the Birds in the British Museum,' Vol. XXIV, p. 573. — JOSEPH MAILLIARD, *San Geronimo, Cal.*

The Greater Yellow-Legs Catching Minnows. — While hunting along the shore of Lake Chautauqua one day during the first week of October just past, I discovered three Greater Yellow-legs (*Totanus melanoleucus*) wading in about three inches of water. They were evidently feeding, so I stopped to watch them. They would run along with their bills just beneath the surface of the water. After watching them for some time, I killed them. When I cleaned the birds, I found minnows (about 1½ inches in length) in the stomachs of two of them. In looking this matter up in the different works on ornithology, I failed to find any mention of this bird feeding on fish. I recite this incident as a fact of probable interest. — H. D. KIRKOVER, *Fredonia, N. Y.*

Spotted Sandpiper removing its Young.—A clearly observed case of the Spotted Sandpiper (*Actitis macularia*) removing its young by flight recently came under my notice, and I place it upon record, as such instances are rarely seen, though they are, perhaps, of tolerably frequent occurrence, as in the case of the Woodcock.

Last summer, in the month of July, I frequently landed on a little rocky islet near the head of the Saguenay River, shortly after it issues from Lake St. John. Each time a Spotted Sandpiper showed much concern for her young, which were often seen running about and were a few days old. On one of these occasions, the mother ran ahead of me to a point of rocks near which I stopped to fish. A few moments later she flew, circling in the usual manner, and as she passed in front of me and within a few feet, I saw one of the young beneath her body, apparently clasped by her thighs; its head was directed forward, somewhat outstretched, and was seen with perfect distinctness. The parent's legs were apparently hanging down as she flew, though I am not positive that what I saw were not the legs of the young. The mother was in sight for about sixty yards, flying heavily and silently, and landed on a large island, though I could not see her at the moment of alighting.—J. C. MERRILL, *Washington, D. C.*

The 1897 Migration of the Golden Plover (*Charadrius dominicus*) and the Eskimo Curlew (*Numenius borealis*) in Massachusetts.—Were it not for the reason that I desire to keep up the continuity of my migrating record on these birds, I should scarcely consider the data I have for this season worth recording. Up to August 22, no Golden Plovers or Eskimo Curlews had been observed at Nantucket or adjacent islands. On this date the wind was southwest, with rain commencing at 9.30 o'clock A. M., accompanied at intervals with lightning. I drove all over the western plover grounds but did not see any birds. I was informed that a flock of thirty Golden Plovers had been seen there later in the day. The wind finally came from the northeast and in the evening two or three persons informed me that they had heard the birds passing over the tower. Although on the alert, I did not hear any. Again, after 10.30 at night, a good many birds were reported to have been heard from several points as they passed over head, but none stopped. At Chatham, Cape Cod, Mass., on this same date (August 22), the first Golden Plovers (four) of the season, as far as I know, were shot, and many others were noted as they passed during the day, on migration. This was the *first* movement going south this season.

I again drove all over the western grounds on Nantucket August 23, seeing four Golden Plovers, flying towards the west; later in the day two others were noted. On the 24th, I am informed, three flocks of Plovers were observed at the westward, one of twenty-five, one of fifteen, and one of thirty, the numbers being estimated. A small flock of six Plovers was also observed at Tuckernuck Island. The wind was easterly on this

date, and it rained at intervals from six o'clock A.M. until twelve o'clock noon, at which time the wind changed to southwest and the weather cleared.

One small flock of eight Eskimo Curlews (the only ones noted here for the entire season) was seen well up in the air, flying on migration, headed towards the west. No birds stopped on the islands, and none were killed.

On the afternoon of August 27, a flock of twelve Plovers was seen, and on the 29th, eleven Plovers were domiciled in a certain protected field on the Kimball farm. On September 17, five Plovers were noted at the western end of Nantucket. The ground on the island this season is in poorer condition than usual, owing to the wet weather, which has enabled the grass and weeds to grow profusely; in addition to this, there has been no ground burned off this year.

I made inquiries several times in the Boston markets in order to ascertain if any of the above birds had been sent in from other localities, but could hear of none. Personally, I have not shot any. It is doubtful if over twelve Plovers have been taken during the entire season on Nantucket and adjoining islands, and not an Eskimo Curlew.

I can but regard with solicitude the killing of these birds in such immense numbers, as also the Bartramian Sandpipers, as they pass northward on migration through the Mississippi Valley in the *spring* on their way to their breeding grounds; many of the females having eggs quite well developed in their ovaries at the time. This has been going on for a number of years. (I called attention to it in Auk, Vol. VIII, p. 24, January, 1891.) How long can it continue? It has been several years since any considerable numbers of these birds have landed on the Atlantic seaboard during August or September. I believe the danger line has been passed long since. Protection is generally the laggard in the race. Our Western Associates should look to this matter and endeavor to put a stop to such annihilation if possible. — GEORGE H. MACKAY, *Nantucket, Mass.*

The Turkey Vulture in Connecticut. — While out driving in Old Lyme, Conn., August 31, I was much surprised to note a Turkey Buzzard (*Cathartes aura*) in company with a Red-shouldered Hawk flying around a small patch of woods. This is the first one I have seen so far north as Connecticut. — ARTHUR W. BROCKWAY, *Lyme, Conn.*

A Black Vulture near Quebec, Canada. — On the 28th of October last a Black Vulture (*Catharista atrata*) was killed on the beach at Beauport, about six miles from Quebec; the bird was shot as it was flying towards a carrion. The man who secured the bird thought he had shot a young Eagle, but on seeing its black and unfeathered head and upper neck, I ascertained it was a Black Vulture. This is, I believe, the first record of a bird of this species being found so far north. It was an adult male. — C. E. DIONNE, *Quebec, Can.*

Black Gyr Falcon (*Falco rusticolus obsoletus*) in Rhode Island.—In looking over some newly-received bird skins in the collection of Mr. Jas. P. Babbitt of this city, I came across a specimen, a fine female in nearly full plumage, of this rare Falcon, which I succeeded in purchasing and added to my collection. It was shot by Mr. Arthur Scudder at Tiverton, R. I., on December 26, 1896. He was duck shooting from a boat over wooden decoys, and at the time the Gyr Falcon was shot it was hovering over the decoys, as if preparing to pounce upon one of them. I referred it to this form by Ridgway's 'Manual,' and after carefully studying over Mr. William Brewster's five series of Gyr Falcons, I felt still more certain of its identity. — A. C. BENT, Taunton, Mass.

Golden Eagle in New Jersey.—Mr. J. H. Fleming of Toronto writes me that August 9, 1897, a live immature Golden Eagle (*Aquila chrysaetos*) was offered him for sale by its captor, a colored man, who had recently caught it near Long Branch, New Jersey.—FRANK M. CHAPMAN, *Am. Mus. Nat. Hist., New York City.*

A New Name for Dryobates v. montanus.—Since the name *montanus* seems to be preoccupied in the genus, I would suggest that the name *monticola* be adopted for the Rocky Mountain race separated by me under the name of *montanus* (Auk, XIII, 1896, p. 32). So far as I have been able to ascertain, *monticola* has not been used in the genus *Dryobates*. — A. W. ANTHONY, San Diego, Cal.

Sennett's Nighthawk (*Chordeiles virginianus sennetti*) at Madison, Minn. — August 13, 1891, I secured a Nighthawk that is very much lighter in color than any specimen of *C. v. henryi* that I had ever seen. I was inclined to believe that it was a juvenile of the latter.

On August 15, 1894, I secured another specimen of this very light form. Last spring I sent the latter specimen to Professor Robert Ridgway, who pronounced it *C. v. sennetti*.

As Mr. L. B. Bishop states (Auk, Vol. XIII, p. 134), Sennett's Nighthawk cannot be mistaken for *henryi*. Both of my specimens are very light colored, and lack the white (in ♂) and tawny throat patch (in ♀) of *C. virginianus* and *C. v. henryi*.

My first specimen was a wounded bird when secured. I kept it caged for 24 hours, and when it died and I dissected it I found its stomach full of small insects and a few small grasshoppers.

The following are the data of the two specimens:

Collection Albert Lano, ♂: Length, 9.25; extent, 24.00; wing, 10.00; tail, 4.32. Weight, 2½ ounces. August 13, 1891. Collected at Madison, Minnesota.

Collection Albert Lano, ♂: Length, 9.00; extent, 22.25; wing, 8.25; tail, 4.00. Weight, 2½ ounces. Collected at Madison, Minnesota.

It gives me pleasure to add this new species to the list of birds of Minnesota. — ALBERT LANO, *Aitkin, Minn.*

The Northern Raven breeding in New England. — During a trip to the outer islands of Penobscot Bay, Maine, I found on June 15, 1897, a brood of three young Ravens (*Corvus corax principalis*), fully fledged and grown, in the possession of two fisherman's boys. They were taken from a nest in a spruce tree on a small uninhabited island about the middle of May, being at that time about ready to fly. One of the old birds was seen hovering at a safe distance. In captivity they each had a wing clipped, and remained at large about the house, though one, wilder than the others, escaped several times to the woods.

One of the boys conducted me to the nest. It was about twenty feet from the ground, two-thirds way up the tree, in a crotch close to the trunk, and was a great accumulation of gnarled, crooked sticks, some of the largest at the bottom being as thick as a man's thumb. Some two feet across on top, its size was about that of the nest of the Red-tailed Hawk. It was deeply hollowed, profusely lined with grass and especially sheep's wool, and emitted a strong, disagreeable odor. On the branches below were caught numerous sticks, which evidently the birds had dropped. A few days later I examined a nest of the Common Crow on a neighboring island from which the young had recently left. It was almost exactly like the Raven's nest, except that smaller sticks were used, wool was entirely absent, and the strong odor was lacking.

I purchased the young, and took them home with me alive. Two of them are still (September 10) in health; the other died August 5 from some bowel trouble. Moulting was first noticed about July 20, when blue-black feathers began to appear in the dull brownish under parts. They are still moulting, the head being the part most affected.

Their habits in captivity are not unlike those of the Common Crow, especially in reference to their hiding of objects. But they manifest more decided carnivorous tastes, preferring flesh to everything else, and tearing up bodies of birds or mammals like veritable hawks. A live young Marsh Hawk incarcerated with them in their roomy cage was next day killed and entirely devoured, save the leg bones and quills. They are very noisy when hungry, and their harsh croaking is audible at a considerable distance. — HERBERT K. JOB, *North Middleboro, Mass.*

The Starling (*Sturnus vulgaris*) on Long Island. — The European Starling seems to have successfully established itself on Long Island. In the summer of 1896 I was informed that this bird was nesting in the tower of the Boys' High School Building at Marcy and Putnam Avenues, Brooklyn. Of the accuracy of this report I was unable at the time to acquaint myself personally. Lately, however, the Starlings may be seen perched on, and flying about this tower at almost any time. It is appar-

ently a place in which they have taken up a permanent abode. Flying from these high perches they look not a little like Martins, and might be mistaken for them at a season when the latter birds are present.

A Starling was killed about a year ago in the immediate outskirts of Brooklyn by a boy who knocked it down with a stone. I am unable to give the date.

I first noted the Starling in the field on October 8, this year, when a flock of a dozen or more was seen perched in a tree by the roadside near the Kensington Station. During this and the next month I saw them in this locality several times. Once or twice one or more birds were seen on the piazza roof of a suburban cottage in apparently *friendly* company with English Sparrows. On October 22, about thirty individuals of this species were seen in this neighborhood. Two specimens were shot, the stomachs of which were sent to Dr. Merriam, chief of the United States Biological Survey.

The bill of fare of the Starling has not been materially changed by its transportation to another continent. It enjoys in England at about the same time of year, about the same food. In the one full stomach examined (the other was nearly empty), ninety-five per cent of the contents was animal matter, mainly insects (multipeds and beetles, larval lampyrids, grasshoppers, crickets, ichneumonid, caterpillar), but also included two small pieces of bone, "probably belonging to some batrachian." The five per cent was merely vegetable rubbish. Dr. Merriam kindly stated that the contents of this stomach, examined by Prof. Beal, agree essentially with those of three stomachs taken in England in October.

The bird will doubtless widen its range on Long Island, though its extension in this direction since its introduction into New York City, in 1890, has not as yet been rapid. — WILLIAM C. BRAISLIN, M. D., Brooklyn, N. Y.

The Song of the Western Meadow Lark. — In 'The Osprey' of July-August, 1897, Rev. P. B. Peabody must refer to me as the recent writer in the 'The Auk,' in connection with the song of the Western Meadow-lark (*Sturnella magna neglecta*). The twelve examples which were copied by me at Gridley, Cal., and published in the 'The Auk' of January, 1896, had been heard year after year by me, some of them at least a thousand times, and were very carefully copied with the help of pitch pipe and paper, and I should have stated in the most positive manner that I had heard them sung perfectly many times, although I had heard them sung imperfectly oftener than otherwise. In the brief note which accompanied those twelve examples of musical notation in 'The Auk,' I said I had heard more *writable* songs at Gridley than in any and all other places where I had been in California. The truth is that I have never heard these songs outside of the township of Gridley, excepting two of them which I have heard near Stockton, where, as at Gridley, I have spent much time.

I am not surprised at Mr. Peabody's unsatisfactory comparison of these Gridley songs with the songs of the Minnesota Meadowlark. They do not sing alike, and probably none of our California birds sing or use such language as Mr. Peabody says the Minnesota birds use, for he says those birds say naughty words. Ours never do that, nor do they even use such language as: "*Screeep-a-rip-ple-rip!! Take a little sip*"! nor "*Jehu, jaa-hu drink a little!*" Those Minnesota birds must be totally depraved. Ours are always well behaved.

Possibly Mr. Peabody does not interpret them rightly, and it is quite certain that no two persons would interpret that song language just alike — neither in Minnesota nor in California. Something would probably depend on the mood that happened to possess the interpreter.

So much for language songs. If Mr. Peabody, or any one who has a little knowledge of music, will take 'The Auk' of Jan., 1896, to Gridley, on the ranch of Charles Belding, he or they will hear Meadowlark songs that will just fit the musical notations in it, and there will be no doubt about the song or songs I intended to represent, although the second note in number nine should be *sol*, or a fifth instead of a third; I believe I lost the true pitch in recopying that number.

Several of those twelve songs have a compass of just an octave, and this is a rather common feature of our *Sturnella* songs in different parts of California.

There are several good points in Mr. Peabody's article in 'The Osprey,' and one of them is his suggestion of using the phonograph in reproducing bird songs. With its aid we may have the pleasure of comparing the notes of the Spade-footed Toad, the Burrowing Owl and the Pigmy Owl with those of the Yellow-billed Cuckoo, or those of the Burrowing Owl with the notes of the European Cuckoo.

Dr. Coues says in his 'Birds of the Northwest,' "The hooting of the Burrowing Owl is so similar to the notes of the Yellow-billed Cuckoo that I should have been deceived myself on one occasion had I not been forewarned by my friend Cooper; and secondly, as this gentleman remarks, the noise made by the Spade-footed Toad (*Scaphiopus*) is also very similar."

When I first heard the Pigmy Owl I thought I heard a Yellow-billed Cuckoo, and I was then familiar with the notes of the latter.

Verbal descriptions of bird songs are probably, in most instances, more interesting to the writer of them than to any one else and any one who has been reading such descriptions, without end, during more than half a life time, is apt to weary of them and yearn for something more definite. If the phonograph should prove to be unsatisfactory in reproducing bird songs we might adopt Lieut. Derby's system of using figures as qualifiers: for instance, a middling good bird song would be a fifty beautiful song; an unsurpassingly beautiful song would be one hundred beautiful; anything for even a moderate degree of precision.—LYMAN BELDING, *Stockton, Cal.*

The White-crowned Sparrow (*Zonotrichia leucophrys*) on Long Island, N. Y.—I am permitted to record the capture at Parkville, L. I., of the White-crowned Sparrow on April 10, 1897. I consider noteworthy the early date of the record.—WILLIAM C. BRAISLIN, M. D., *Brooklyn, N. Y.*

Rank of the Sage Sparrow.—The particular piece of country of interest in the present connection is near the head of the Little Tujunga Cañon, in the mountains of the central part of Los Angeles County, California, at an elevation of 4000 to 6000 feet. It is well on the Pacific side of the divide, but the Mojave Desert is not more than ten miles to the northeast, while the fertile plains of the Pacific slope are about the same distance southwestward. The rolling mountain ridges, especially on their southern sides, are covered with a more or less heavy growth of brush, composed of several kinds of dwarf trees and shrubs, such as manzanita, scrub-oak, greasewood, buckthorn, etc.

In the vicinity of this semi-arid tract of limited extent, I spent the month of July, 1897, collecting birds. Along with *Spizella atrigularis*, *Spizella breweri*, *Chamaea fasciata henshawi*, and others of the brush-loving birds, I was surprised to find quite numerous both *Amphispiza belli* and *A. (belli) nevadensis*. The former is a common bird in the foothills nearer the coast, but the latter I had previously supposed to be exclusively a bird of the sage-brush deserts. Indeed, here its light colors did not well harmonize with the deep shades of the brush, and it was rendered quite conspicuous, much more so than the darker-colored Bell's Sparrow. The Sage Sparrows have evidently extended their range up over the mountains, so that here the habitats of the two forms overlap.

What was most interesting was that the two forms were inhabiting the same locality and breeding, and yet I saw or obtained no specimens of an intermediate character. I secured adults and young of both forms, and none showed any evidence whatever of intergradation or even 'hybridization.' The far lighter tone of coloration of *nevadensis* and its larger size rendered both adults and young readily distinguishable from those of *belli*, even at a long distance. The call-notes of the two birds were slightly different in quality, and the Bell's Sparrow seemed the more retiring, keeping itself groundward among the brush, while the Sage Sparrow was prominent, perching at the tops of the bushes and flying from one to another frequently.

These observations have led me to conclude, as others have surmised, that these two forms are specifically distinct. I have never learned of any intermediate specimens having been taken, and Mr. Walter E. Bryant, who has seen and taken many of these birds, tells me that he has never found an intermediate, and he fully agrees with me as to their distinctness. I therefore propose that these two forms be considered hereafter as separate species. According to the A. O. U. Check-List, the group should, therefore, stand as follows:—

574. *Amphispiza belli* (Cass.).

574a. *Amphispiza belli cinerea* (Townsend).

574.1. *Amphispiza nevadensis* (Ridgw.).

The question might arise as to which species the form *cinerea* belongs as a race. I have learned nothing definite in regard to this, so until someone finds otherwise, it might stand as it is, though the probabilities point toward its relationship with *A. nevadensis*. — JOSEPH GRINNELL, Pasadena, Cal.

The Blue-winged Warbler (*Helminthophila pinus*) in Eastern Massachusetts. — On the afternoon of May 15, 1897, while collecting among some scattered bushes and low trees on the edge of a swampy wood in the section of Boston known as Dorchester, near the West Roxbury and Hyde Park lines, I came across a bird of this species. When first seen the bird was sitting on the outer branch of a small bush about ten yards from me. While I was watching, it suddenly flew directly toward me for about ten or twelve feet after an insect, which it caught while on the wing, poisoning itself for a moment in the air and then returning to the same bush, immediately passing through to the other side where it was lost to view.

Although this species has been taken in West Roxbury and also in Dedham, it is a rare bird in Massachusetts and worthy of note. — FOSTER H. BRACKETT, Boston, Mass.

Chestnut-sided Warbler in Eastern Kansas. — While collecting birds on Oct. 12, 1896, I shot an adult male Chestnut-sided Warbler (*Dendroica pensylvanica*) in the fall moult, near Chestnut's Ford on the north bank of the Pottawatomie River, one mile southwest of town. It was feeding among some maple bushes at the water's edge when I first noticed it, being attracted by its familiar note.

There are only two other records, to my knowledge, of the capture of this bird in Kansas, which I quote from Goss. "Taken at Leavenworth in May, 1871, by Prof. J. A. Allen, and near Topeka, May 2, 1873, by Prof. E. A. Popenoe." — WALTER S. COLVIN, Osawatomie, Kans.

The Aërial Song of the Maryland Yellow-throat. — The flight song of the Maryland Yellow-throat (*Geothlypis trichas*) one finds stated in many of the leading manuals as never heard until late July or August. This misstatement, known to be such by many ornithologists, I have never seen questioned.

I have noted this flight song in Eastern Massachusetts as early as May 16, only about a week after their arrival, and heard it off and on throughout the rest of May, June, and July. — REGINALD HEBER HOWE, JR., Longwood, Mass.

Mockingbird (*Mimus polyglottos*) at Taunton, Mass. — Mr. A. R. Sharp of this city shot and presented to me a fine specimen of this bird

on Nov. 11, 1897. It proved to be a female in good condition and its stomach contained a number of seeds and part of the skin of a tomato. The plumage showed no signs of wear and tear which would brand it as an escaped cage bird.

It was killed just outside of this city near Mr. Sharp's farm, and was mistaken for a Shrike at the time.

This is very late in the season for a Mockingbird to be found so far north, yet I cannot think that it had recently been in captivity.—A. C. BENT, *Taunton, Mass.*

Late Nesting of the Carolina Wren in Monongalia Co., W. Va.—On August 21, 1897, while driving along the road near Morgantown, W. Va. I discovered, among the dangling roots on the upper side of the road, a nest of the Carolina Wren (*Thryothorus ludovicianus*) containing five fresh eggs. The position of the nest very much resembled that of the Louisiana Water Thrush (*Seiurus motacilla*) and had I not got out to positively identify the nest, would not have known it was occupied. The old bird allowed me to approach very closely, placing my hand on the side of the nest before she left. She then fluttered out and down along the side of the road into some bushes.—J. WARREN JACOBS, *Waynesburg, Pa.*

Hemiura leucogastra (Gould)—A Correction.—In 'The Auk' for October, 1897 (Vol. XIV, pp. 409, 410) I maintained that Baird's determination of *Troglodytes leucogaster* Gould should be accepted, since Baird had Gould's type before him, while Messrs. Sclater, Salvin, and Godman who determined Gould's bird differently, did not have the advantage of an acquaintance with the type. Mr. H. C. Oberholser has called my attention to the fact that Gould's type afterwards came into the possession of the British Museum (as shown in Vol. VI of the Brit. Mus. Cat. of Birds, p. 285, 1881) and proved to be the *Cyphorhinus pusillus* of Sclater, confirming the determination made by Messrs. Sclater and Salvin in 1873. That Baird had what purported to be Gould's type of *Troglodytes leucogaster* cannot be doubted; that he could have confounded a *Hemiura* and a *Thryothorus* is incredible; the natural inference is that some confusion of labels among the skins received from Gould may have been the cause of Baird's wrong identification.—WALTER FAXON, *Museum of Comparative Zoölogy, Cambridge, Mass.*

Bicknell's Thrush on Mt. Ktaadn, Maine.—On June 22 and 23, 1897, I made a short visit to Mt. Ktaadn, Maine, partly for the purpose of ornithological observation. On the 22d I heard three Bicknell's Thrushes (*Turdus aliciae bicknelli*) singing along the Southwest Slide, and on the 23d I heard the same three and two more besides, one pretty well up the

Slide and the other on the Table Land at an altitude of a few hundred feet lower than the top of the highest peak (5,215 feet). Unfortunately I was unable to obtain a specimen, but a familiarity with the song of this bird acquired in the White Mountains and during the migrations, leaves no doubt whatever in my own mind of the identification. This subspecies has never been reported from Maine, I believe, though it is included in the 'hypothetical' list in Mr. Ora W. Knight's recent list of Maine birds. The only other birds noted on the mountain which I did not also find in the lowlands about there were *Dendroica striata*, which were common along the Slide, and *Dendragapus canadensis*, one female of which I observed on the Slide. Ktaadn affords but little cover for birds, the upper three thousand feet being for the most part very steep and rocky, giving no chance for trees. The trees along the Slide are almost entirely deciduous, and no coniferous woods were to be seen at any height except those in the great South Basin on the northeast side of the mountain, about 2300 feet below the highest summit or about 3000 feet above sea-level. It is quite possible that these Basin woods may have contained some more northern forms, but I was unable to visit them. Some one should go there in the breeding season. The Basin is best visited from the east side. The scrub fir on the Table Land harbored *Turdus aliciae bicknelli* and *Zonotrichia albicollis*, and doubtless *Junco hyemalis* too, but it is too low to make very good cover.—FRANCIS H. ALLEN, *West Roxbury, Mass.*

Two Species new to the List of Birds found in West Virginia.—CHUCK-WILL'S-WIDOW (*Anthus carolinensis*), ♂ adult. Picked up in a grove, apparently benumbed by cold, by Mr. John H. Crawford, near Lewisburg, Greenbrier Co., W. Va., on April 23, 1897. Now in Mr. Crawford's possession.

SWAINSON'S HAWK (*Buteo swainsoni*), ♂ adult. Shot by Mr. M. M. Collins four miles north of White Sulphur Springs, W. Va., September 16, 1897. This hawk is now being mounted for Mr. M. M. Collins of Covington, Va.

I believe that, heretofore, Nashville, Tenn., has been about the farthest north, in the interior, from which *Anthus carolinensis* has been recorded. — THADDEUS SURBER, *White Sulphur Springs, W. Va.*

LAKE MICHIGAN NOTES.—*Larus glaucus*. GLAUCOUS GULL.—While walking along the beach of Lake Michigan, east of Millers, Indiana, August 8, 1897, in company with Mr. J. G. Parker, Jr., and Mr. Fred Hilgard, I had the good fortune to take a fine female of this species. It is in the pure white plumage of the young of the second year; it is immaculate, with the exception of a few feathers on the wing-coverts, which are of a pale brownish gray. I believe this is the first record of capture for the Calumet Region and Indiana.

Tringa canutus. KNOT. — There has been quite a large flight of Knots this fall, and I have obtained three. The hunters from the gun clubs along the beach have shot a large number of this species, all of which are in the juvenile plumage. One of my birds, taken August 21, shows a wash of pale brick red over the lower parts. It is rather strange that none are observed in the adult plumage. Although the majority of the maritime birds observed are juveniles, there are always (excepting in the case of *T. canutus*) a few adults among them.

Macrorhamphus griseus. DOWITCHER. — On August 21 my friend, R. A. Norris, shot an adult of this species, which was flying with a flock of ten or more along the beach at Whiting, Indiana.

Symphemia semipalmata. WILLET. — On August 14, at Millers, I obtained five of these birds from a flock of twelve, as they were feeding on a sand bar along Lake Michigan. Much to my surprise they would return to my call, and I could have obtained nearly the whole if I had so desired.

Ægialitis meloda circumcincta. BELTED PIPING PLOVER. — This species has become very rare in the last fifteen years, and on hearing that a gentleman had obtained a pair on the 27th of September at Millers, I went down there on the following Saturday. I obtained an adult male, and also found two pairs of young in the down, the mother bird having been shot on the 27th. I was attracted to them by their plaintive piping and found them almost dead from starvation. While this record of finding the young is a rare one, being, I believe, the first one for this region, both the gentleman who shot the old birds and myself regret the taking of the breeding birds. The group is mounted and in the collection of the writer in the Chicago Academy of Sciences.

Haliaeetus leucocephalus. BALD EAGLE. — On the 21st of August, at Millers, I obtained a juvenile Bald Eagle and saw five more which had nested in that locality. Even at this late date they were still in the vicinity of the nest, which I found. This is the second brood of Bald Eagles which have nested at Millers this year, and the record is a rather unusual one, the locality being so near the railroads and the city of Chicago. — FRANK M. WOODRUFF, *Chicago Academy of Sciences, Chicago, Ill.*

RECENT LITERATURE.

Elliot's Shore Birds, 2d Ed.—Our extended notice of this work (Auk, Jan. 1896, pp. 64-66) leaves little to be said now, beyond renewing our felicitations on the success which Mr. Elliot's lending a hand to popularize ornithology has achieved, as witnessed by the call for another edition in a year from original date of publication. The second edition remains substantially the same as the first, though, as stated by the author in his new preface, "the letter press has been carefully examined and the few typographical errors that may have existed in the first edition have been corrected. The kindly criticism, also, of my colleagues on these matters has been of considerable assistance. In the Appendix the Key to the Families has been slightly rearranged, but not changing in any way the definitions." The omnipresence if not omnipotence of the printer's devil is displayed in this new preface, which leaves the misprints *Squaturola* and *Helodromus* to be corrected in the next edition of this admirable work, which we expect to see in due course.—E. C.

Elliot's Gallinaceous Game Birds of North America.¹—Seldom are the original and next edition of a book on birds published so almost simultaneously as to reach an active reviewer's desk together, but such is the result of a happy conjunction of authorial and publicational ability in the present instance. We understand that the first edition was exhausted in a month; the second immediately appeared. We believe it is identical, except in the appearance of the explaining words on the title-page, there having hardly been time for sandpapering, even had any places needing that process been observed. The plain form of the book is well made in all its appointments, presenting a very attractive appearance, like most of Mr. F. P. Harper's issues; the large paper copies are sumptuous, almost to be styled luxurious.

¹ The | Gallinaceous | Game Birds | of | North America | including the Partridges, Grouse, Ptarmigan, | and Wild Turkeys; with accounts of their dis- |
persion, habits, nesting, etc., and full descrip- | tions of the plumage of both
adult and young, to- | gether with their popular and scientific names. | A book
written both for those who love to seek these birds afield with | dog and gun,
as well as those who may only desire to learn the | ways of such attractive
creatures in their haunts | By | Daniel Giraud Elliot, F. R. S. E., etc. | [Etc.
5 lines of titles.] | With forty-six plates | New York | Francis P. Harper |
1897 | —1 vol., 100 large-paper copies, numbered and signed by author, roy.
8vo, others 8vo., both with rubricated title, 1st and 2nd eds. pub. nearly
together, Oct. and Nov., 1897; pp. i-xviii, 19-220, pll. 1-46, and colored charts
inside back cover.

After what we have said in 'The Auk' regarding Mr. Elliot's 'Shore Birds,' it will suffice to inform our special clientèle that 'Game Birds' is constructed in precisely the same fashion; the subject is changed but not the mode of treatment, and the two books form companion volumes which every sportsman, and all others whom Mr. Elliot describes upon his title page, will delight to possess. If the present work somewhat outstrips the former one in popularity, it will probably be because more persons go into the dry woods and fields than into the "demnition moist, unpleasant" haunts of the *Limicolæ*. Mr. Elliot is happy in giving a formal didactic treatise, satisfactory to the technical expert, an entertaining turn that will make his reputation as a popular writer. Amateurs can always amuse one another, but it takes a professional who knows a great deal to write for people who do not know much in the way they ought to be written for. What the public ought to want is seldom what that huge blundering collective animal does want; and he is a wise man who knows how to take the creature by the ear and keep out of the way of its business end—its heels.

Thus implying if not expressing all that need be conveyed in general regarding the present work, we turn to some particularities which we should hardly bring up if we were not writing in a journal mainly occupied with technicalities. The Turkey Question which we lately raised (Auk, July, 1897, pp. 272-275) seems to have exercised the author's patience, but he falls in line with our contention that *gallopavo* belongs to the Mexican species, and adopts *sylvestris* for the U. S. bird. This is a point of variance from the A. O. U. Check-List but in strict conformity with the A. O. U. Code; the change must be made in our next edition. We should be sorry to see *M. sylvestris ellioti* disappear from our list, but believe its proper name to be *M. s. intermedia*, for reasons which will be apparent on looking up Sennett's record of 1879. There are, no doubt, too many Ptarmigan in the book; Mr. Elliot says so, expressly, as on p. 149; but by a device which we are hardly free to criticise, because we have resorted to it ourselves too often, such a form as Allen's Ptarmigan is capitally affirmed and textually denied. One who will study the latest British Museum Catalogue of these birds will be inclined to suspect that the A. O. U. list of Ptarmigan is shaky in some other case or cases. We are pleased to find the author agreeing with us (Auk, June, 1897, p. 214) on the generic validity of *Lophortyx*, which the A. O. U. were ill-advised to degrade from its long-accustomed rank. Another good point Mr. Elliot scores is insistence upon the generic distinction between *Dendragapus* and *Canachites*—surely he should know what he meant himself when he founded the former genus more than 30 years ago. As we have remarked elsewhere (Science, July 2, 1897, p. 10), *Dendragapus* was founded for the express purpose of distinguishing certain Grouse from certain other Grouse; and for us to use it for the opposite purpose from that intended by its founder "is simply nomenclatural

hocus-pocus, and as such it is puerile, unscientific, and immoral." We shall long stand disconsolate outside the pearly gates of paradise, like the Peri of oriental allegory, if we try to enter the blessed abode of nomenclatural stability on any such shifty tack as that!¹ In some other respects Mr. Elliot ties fire-brands to foxes' tails and turns them loose in the stubble of bad names on our Check-List, with a cool audacity to be expected by those who know him, and to make him a holy terror, something like the undersigned, to those who mistake misspelling for stability of nomenclature. Baird, for example, could he speak now, would thank nobody for perpetuating his blunder of *Pediocates*; Mr. Elliot corrects it to *Pediacetes*, uniformly with our 'Key' since 1872, unconformably with our Check-List. Of what use is our obnoxious Canon XL, if it cannot be enforced? Tyros and amateurs, virtuosos and ignoramuses, may respect it, because they know no better; but it is a dead letter to such as Mr. Elliot, who will continue to disregard it with imperturbable severity. We trust that the dignified weight of his example will not be lost upon those who have need to feel its force.

Mr. Elliot's two books, 'Shore Birds' and 'Game Birds,' are, we believe, the first appearance of a veteran technician in the distinctive rôle of a publicist. Their success is assured. We point to the *Anseres* as other suitable subjects upon which to exercise a facile pen, and trust that the work required to complete a trilogy may soon appear. — E. C.

Gibson's 'Studio Neighbors.'²—The late William Hamilton Gibson, as a reporter with pen and brush of the life-histories of our familiar birds, beasts, and flowers, was without a rival. There have been and are greater writers and more talented artists than he, but in no one man was the gift of observing animals and plants and the power of describing what he saw, both verbally and pictorially, so well developed. His death was an irreparable loss to the cause of popular nature study, a loss with which we are impressed anew as we examine this posthumously published volume of his writings. It is only in part devoted to birds, for in the later years of his life Mr. Gibson's attention was largely given to flowers, but the charm with which he invested his subject is well illustrated here in the chapters entitled 'A Familiar Guest' and 'The Cuckoos and the Outwitted Cowbird.'

While we must regret Mr. Gibson's premature death, we have reason to give thanks for the legacy he has left us. In addition to the present work,

[¹ See also Science, July 2, 1897, p. 18. — J. A. A.]

² My Studio Neighbors | By | William Hamilton Gibson | Illustrated by the Author | [Seal] | New York and London | Harper & Brothers, Publishers—1898. — 8vo., pp. x + 237. Numerous illustrations.

he was the author of some six others,¹ all containing original observations on the habits of our birds. — F. M. C.

'Bird Neighbors.'² — This is an interesting addition to the rapidly growing list of bird books, designed to popularize ornithology, by an author whose name was previously unknown to naturalists. It is evident, however, that she understands the needs of the audience to whom her book is addressed, and the key-note of the book is to simplify the problem of identification. This is done by grouping the species treated according to their haunts, characteristic habits, season, and finally color. About a page is devoted to the life-history of each species, and here the author shows that not only has she a practical grasp of her subject but also fully appreciates its æsthetic and poetic sides.

Fifty-one of the species are represented in color by plates which have appeared in the Chicago magazine 'Birds.' They are of special interest as showing the most recent development of the three-color printing process. It is evident, however, that poor taxidermy and lack of taste in composition have combined to furnish originals whose faults the process has reproduced with painful accuracy. — F. M. C.

The New Birdcraft.³ — It is not often a reviewer's pleasure to have a publisher accept his advice in so literal and liberal a sense that its soundness is more than vindicated. We would not claim undue credit for the appearance of this beautiful book in its present form, but so fully does it now meet our ideas of what it should have been that we cannot forbear quoting from our review of the first edition⁴ with its inharmonious

¹ 'Eye Spy'; 'Sharp Eyes'; 'Strolls by Starlight and Sunshine'; 'Happy Hunting Grounds'; 'Highways and Byways'; 'Pastoral Days' — all published by Harper & Brothers.

² Bird Neighbors. An | Introductory Acquaintance | with one hundred and fifty | Birds Commonly Found in on the gardens, meadows, and | woods about Our Homes. | By | Neltje Blanchan | with Introduction By John Burroughs | and Fifty Colored Plates | New York | Doubleday & McClure Co. | 1897. — 8vo., pp. xii + 234, Colorotype plates, 51.

³ Birdcraft | A Field Book of two hundred Song | Game, and Water Birds | By | Mabel Osgood Wright — Author of 'The Friendship of Nature,' 'Tommy Anne' | 'Citizen Bird,' etc. | With Eighty Full-Page Plates by | Louis Agassiz Fuertes | New York | The Macmillan Company | London: Macmillan & Co., Ltd. 1897 | All rights reserved — | 8vo. pp xvi + 317; colored frontispiece and 79 full-page half-tones.

⁴ The Auk, XII, 1895, p. 283.

colored figures, in criticizing which we said: "We can wish Mrs. Wright's book no better fortune than that in the future editions it is sure to reach, it may have illustrations in keeping with the exceptionally high character of the text"; and no better compliment can be paid to either than to add that this hope has been fully realized. Mr. Fuertes's drawings, which so vivify the pages of 'Citizen Bird,' are here reproduced for the most part as full-page plates, which in size are obviously more just to the originals than the smaller text figures of the work in which they first appeared.—F. M. C.

Dixon's Migration of Birds.¹—The 'amended edition' of Mr. Dixon's book, 'The Migration of Birds,' is very different from the original, published in 1892 (*cf.* Auk, X, 1893, pp. 70-73). Many of the theories and statements then put forth with so much confidence are now discarded, the book having been not only, as claimed on the title page, "entirely rewritten," but rewritten from a wholly different standpoint. His views are perhaps still subject to change, as he says that in writing the present book he was compelled to modify his views as expressed in his recent work on 'The Migration of British Birds,' published in 1895, wherein he propounded "a hitherto undiscovered Law of Dispersal." This law he looks upon as his "first *original* attempt to solve the problem of bird migration." Although written with the same confidence in his own conclusions as was the first, the present is a vastly better work, both in matter and method, for he now deigns to give his readers references to some of his sources of information. He also displays much greater familiarity with the literature of the subject, and has evidently greatly profited by works that were quite unknown to him, although previously published, when his first book was written. We miss many of the ideas so strikingly Gätkean met with in the first edition, many of which are now not only discarded, but formally controverted at considerable length. Especially is this the case with Gätke's "assumption" that "young birds migrate absolutely before their parents" (p. 113), where several pages are devoted to a critical analysis of Gätke's evidence.

The author states in his preface: "In some respects the present volume may be regarded as an effort to stem the torrent of mystery which bids fair soon to overwhelm the subject of Migration; to explain its varied phenomena by an appeal to natural laws and to common sense; not by the invocation of esoteric influences and supernatural impulses." Again he says (p. 125): "The effort to increase the mystery of Migra-

¹ The | Migration of Birds: | an attempt to reduce Avian Season Flight to Law. | By | Charles Dixon. | — | Amended Edition. | Entirely rewritten in accordance with the Author's latest Discoveries and | Views respecting the Subject of Avine Dispersal. | — | London: Horace Cox, | Winsor House, Bream's Buildings, E. C. | — | 1897. — 8vo, pp. xix + 426, with 2 maps.

tion seems little short of a fascination with some naturalists, and prominent amongst these, we deeply regret to say, must be included such a veteran and accomplished observer as Herr Gätke, whose anti-Darwinian and anti-evolutionistic views may very probably be responsible for the position which he has taken up with regard to this portion especially [of how birds find their way] of the phenomenon of avine season-flight." Consequently it is not surprising to find many pages devoted to an exposure of the fallacies contained in 'Heligoland,' and an attempt to counteract the undesirable effect of copying as "*ex cathedra*" these "wild speculations," and "startling estimates of the speed at which birds fly," into many popular works on the subject of migration. This lament is doubtless widely shared by thoughtful students of the subject.

Mr. Dixon here offers us, however, a new theory of the origin of migration in birds, all previous theories, in his opinion, proving untenable. The new hypothesis is founded on what he claims "to be a hitherto undiscovered law governing the geographical distribution of species," which he terms "the Law of Dispersal." This law is based on the following assumptions: (1) That there was formerly a vast extent of intertropical land, stretching continuously around the globe, in which life originated and from which life has spread in the direction of the poles. A former extensive antarctic continent, which some writers believe once existed, he considers as having no bearing on the question; from his point of view, the former great extension of land must have been equatorial. The very general belief in the comparative permanence of the principal oceans and land masses, held so firmly by nearly all geologists of high standing, he thinks is without foundation, and that this erroneous view is responsible for the mistaken opinions now so generally held on the subject of the origin and cause of migration. (2) He affirms that the Glacial Epoch could not have been the inducing cause of migration in the northern hemisphere; the belief that species began "to retreat or emigrate beyond the influence of the adverse conditions of existence, as the climate changed and became more severe" is absolutely opposed, he says, by all the facts; in other words, as he repeatedly affirms, an emigration southward to escape the adverse conditions of the advancing ice age, is a myth. There was no movement southward of any species; they were simply exterminated; "the only forms that survived this several times repeated glacial invasion were those whose pre-glacial breeding range extended beyond its influence." The current opinion "that species evacuated their northern homes as the glacial periods came on, and returned to them, more or less modified, as the climate ameliorated," is, in his opinion, "an entirely erroneous interpretation of facts." (3) Migration, he claims, is the corollary of emigration; both are due to an effort to increase the breeding range of the species, and the lines of migration are always along the old routes of the gradual range extension of the species. (4) Spring migration is due

entirely to the impulse to breed. (5) The true home of the species is its winter area, this being also its original centre of dispersal. (6) Autumn migration is thus a return to winter haunts or centres of dispersal, under what he terms a nostalgic impulse, or homesickness; scarcity of food, either present or prospective, decrease of temperature, or any other adverse conditions, have nothing whatever to do with the inception of this autumnal movement.

This is a brief outline of Mr. Dixon's premises and conclusions. An analysis of his evidence shows that they rest mainly on personal 'belief,' and novel assumptions unsupported by any considerable array of facts. He makes repeated reference to his study of "pre-glacial distribution," and to his "investigation of post-glacial emigration," as having convinced him respectively that a southern emigration, or a southern migration, "to escape adverse climatic conditions is a myth," and that "range extension trends in only two directions," namely, from the equator towards the poles. Unfortunately the evidence that has led to these convictions is not disclosed, at least in any formal way.

In discussing his 'law of dispersal,' he says it elucidates "almost innumerable facts of dispersal which have hitherto baffled all attempts to explain them." Among these is the absence of tropical forms in temperate latitudes, etc. It is obvious, however, that the influence of temperature in limiting the dispersal of species is a factor in the problem that has either never occurred to him, or else is one which he chooses to studiously ignore throughout his work.

It is, on the whole, perhaps hardly worth while to take Mr. Dixon seriously, inasmuch as he shows no great knowledge, in the first place, of the elements of the problem he proceeds to treat so confidently, which is no less than the origin of life in general and an explanation of its present geographical distribution; yet, so far as his book shows, he has never thought of it in that light. To him it is simply the migration of birds, which involves incidentally questions of their geographical origin and distribution, although he may be supposed to refer to life in general, especially in speaking of his grand discovery of what he terms the "Law of Life's Dispersal." Birds of course are not to be treated as a group apart from the rest of the animal kingdom, but as subject to the same general laws of dispersal as other animals, and even plants. On this an appeal to the geological record is fatal to our author's grand conceptions, who, though referring often to his "preglacial investigations," gives no evidence of knowing anything of either geological or biological conditions prior to the Ice Period. He is thus free to construct, remove, or transpose continents and seas to suit his hypotheses of bird migration, as well as to assume breeding areas that do not exist, simply because there should be such breeding areas to render his theories of both migration and dispersal in any degree tenable.

It is therefore to be regretted that a work so full of information for the

general reader on the various phases of bird migration should be more or less vitiated throughout by the ill-devised theory which pervades and colors an otherwise praiseworthy book,—a work, in other respects, as regards its general character, far in advance of Mr. Dixon's previous one bearing the same title.—J. A. A.

Marsh on the Affinities of *Hesperornis*.¹—Professor Marsh here reaffirms the correctness of his conclusion, published in 1880, that “the Struthious characters, seen in *Hesperornis*, should probably be regarded as evidence of real affinity, and in this case *Hesperornis* would be essentially a carnivorous, swimming Ostrich.” Authors who had not seen the original specimens, says Prof. Marsh, “seem to have accepted without hesitation the striking adaptive characters of the posterior limbs as the key to real affinities,” till soon “the Ratite affinities of *Hesperornis* were seldom alluded to in scientific literature.” He has remained silent, “leaving to future discoveries the final decision of the question at issue.” This decision, Prof. Marsh thinks, is now on record, Prof. Williston having discovered near the original type locality a remarkably perfect specimen of *Hesperornis*, with the feathers in place, showing that *Hesperornis* had “the typical plumage of an Ostrich.” Reference to Prof. Williston's paper (Kansas University Quarterly, Vol. V, No. 1, July, 1896, pp. 53, 54, pl. ii) shows that there is still ground for a difference of opinion as to the Struthious character of the downy feathers found on the tarsus and head of Prof. Williston's specimen of *Hesperornis*.—J. A. A.

Stone on the Genus *Sturnella*.²—Mr. Stone's paper has relation mainly to the forms referred to *S. magna mexicana*, the Rio Grande Valley phase of which group Mr. Stone now separates as a new subspecies, under the name *S. m. hoopesi*. This form resembles *magna* in the coloration of the lower parts, it lacking the yellow on the malar region, while the upper plumage is lighter even than in *neglecta*, with the tail bars “more distinct than in any of the other races.” True *S. m. mexicana* thus becomes restricted to southern Mexico and Central America, *S. m. hoopesi* taking its place in the A. O. U. Check-List. The Florida bird, which has sometimes been referred to *mexicana*, Mr. Stone finds is not separable from Louisiana examples, and that these latter differ but little from specimens from southern Indiana and southern Illinois. He considers it therefore inadvisable to separate this Gulf coast phase from *magna*.—J. A. A.

¹ The Affinities of *Hesperornis*. By O. C. Marsh. American Journal of Science, III, April, 1897, pp. 347, 348.

² The Genus *Sturnella*. By Witmer Stone. Proc. Acad. Nat. Sci. Phila., 1897, pp. 146-152.

The Proper Name of the Western Horned Owl.¹—In a paper in 'The Auk' for April, 1896 (p. 153), Mr. Stone proposed the name *occidentalis* in place of *subarcticus* Hoy, the latter being a synonym of *arcticus* Swain., selecting a type specimen from Mitchell Co., Iowa. This specimen, however, proved not to belong to the form he intended to name (see Auk, Jan., 1897, p. 134), and he therefore now renames it *pallescens* (*Bubo virginianus pallescens*), selecting as type an example from near San Antonio, Texas.

With this change the Horned Owls would stand in the A. O. U. Check-List as follows:

- 375. *Bubo virginianus* (Gmel.). Great Horned Owl.
- 375 a. *Bubo virginianus pallescens* Stone. Western Horned Owl.
- 375 b. *Bubo virginianus arcticus* (Swains.). Arctic Horned Owl.
- 375 c. *Bubo virginianus saturatus* Ridgw. Dusky Horned Owl.
- 375 d. *Bubo virginianus pacificus* Cass. Pacific Horned Owl.—J. A. A.

'Nature's Diary.'²—Under this title Mr. Francis H. Allen has brought together a large number of selections from the works of Thoreau, Burroughs, Torrey, Bolles, Lowell, Hawthorne, Emerson, and others—in all 379 quotations from 14 well-known authors—one or more for each day of the year. Nearly two-thirds of the quotations are from Thoreau, and about one seventh from Burroughs. They relate primarily to birds and flowers, but many are general, or relate to the season rather than to any individual species of bird, beast, or plant. The work is not paged, and has no index. The quotations are printed on the left hand page, two days being allotted to each page, and the right hand page is a "Calendar of the arrival of birds and the first blooming of flowers." The locality to which most of the quotations refer is "the neighborhood of Boston. This will doubtless prove a welcome anthology to lovers of nature.—J. A. A.

Baskett's 'The Story of the Birds.'³—Mr. Baskett's 'Story of the Birds' does not pretend to tell the whole story but attempts "to present in a

¹ Proper name for the Western Horned Owl of North America. By Witmer Stone. American Naturalist, March, 1897, p. 236.

²Nature's Diary | Compiled by | Francis H. Allen | "A minstrel of the natural year." | [Seal] Boston and New York | Houghton, Mifflin and Company | The Riverside Press, Cambridge | 1897 | — 12mo. pp. v + about 190ll., un-paged, with 8 photogravure pll.

³ Appleton's Home Reading Books | — | The | Story of the Birds | By | James Newton Baskett, M. A. | Associate Member of the American Ornithologists' Union | [Vignette] New York | D. Appleton and Company | 1897—12mo, pp. xxx + 263, with 20 full-page illustrations and numerous cuts in the text.

rather unusual yet popular way the more striking features of their probable development." The chapter headings are too numerous to quote in full, but the following will give an idea of the style of treatment: I, A bird's forefathers; II, How did the birds first fly, perhaps? V, The cut of a bird's frock; VI, About a bird's underwear; VII, A bird's outer wrap; VIII, A bird's new suit; IX, 'Putting on Paints and Frills' among the birds; XI, War and weapons among birds; XIV, Freaks of bachelors and benedicts in feathers; XXIII, Tools and tasks among birds; XXV, A little talk on birds' toes; XXVIII, What a bird knows about geography and arithmetic; XXX, A bird's modern kinsfolk.

Mr. Baskett has treated the various topics relating to birds,—their structure, functions and various adaptations,—in a manner likely to interest the general reader, and for the most part has shown a creditable familiarity with his subject. He has, however, a predilection for hypothesis, and thinks every fact relating to habit or structure should be accounted for, and that even a poor theory is better than no theory at all. A good square admission that there are still some things we do not know is not to be tolerated. In the main, however, our author may be taken as a safe leader, and his little book should do much toward enlightening the general reader about birds and their relation to their surroundings. The last 20 pages consist of notes on birds as seen 'Through the Window Pane' of the author's study. The illustrations are largely from Chapman's 'Handbook of Birds of Eastern North America,' to which they are duly credited in the Publishers' Note.—J. A. A.

Chapman's 'Bird-Life', Colored Edition.—In the new edition of Chapman's 'Bird-Life' (see Auk, XIV, July 1897, pp. 336-339) the text has been revised, and the size of the book increased to a full octavo, and the plates enlarged and beautifully reproduced in colors, adding greatly to the value of the work as an aid to the identification of the 100 species thus figured. The publication of 'Bird-Life' in its present form thus well meets the demand for a popular work on our common birds, illustrated with colored plates, at a reasonable price.—J. A. A.

Montgomery's List of the Birds of West Chester, Chester Co., Pa.¹—This is a carefully annotated list of 145 species observed in the immediate vicinity of West Chester, Chester County, Pennsylvania, during the years 1885-91, and 1895-97. Most of the observations were made within an area of only five miles' radius from West Chester, and no species is included in the list which was not either taken by the author or seen by him in the

¹ A List of the Birds of the Vicinity of West Chester, Chester Co., Pennsylvania. By Thomas H. Montgomery, Jr., Ph. D. American Naturalist, 1897, pp. 622-628, 812-814, 907-911.

flesh. For many of the migratory species detailed records are given of the spring arrivals. The list is thus a welcome addition to an exact knowledge of bird distribution in Pennsylvania. — J. A. A.

Grinnell on the Birds of Santa Barbara, San Nicolas and San Clemente Islands, California.¹— This 'Report' forms the first of a series of papers giving the results of the work of a scientific exploring party to the southern Santa Barbara Islands, sent out by the Pasadena Academy of Sciences, in charge of Mr. Grinnell, and mainly through the generosity of Mr. Halett C. Merritt. It also is noteworthy as forming the first brochure of this young Academy. Mr. Grinnell was assisted in his ornithological work by Mr. Horace Gaylord. The report is based on the field notes of the party and on a collection of 450 birds' skins and many eggs, and consists of four separate lists, as follows: (1) 'The Land-Birds observed [May 13-18] on Santa Barbara Island,' numbering 14 species; (2) 'Land-Birds observed [May 19-26] on San Nicolas Islands,' numbering 9 species; (3) 'Land-Birds observed [May 29-June 7] on San Clemente Island,' numbering 25 species; (4) 'Entire list of Water-Birds observed,' numbering 24 species. These lists are quite fully annotated, and give much interesting information regarding the breeding habits of many of the species observed. One new species (*Pipilo clemente* Grinnell, described in this journal (Vol. XIV, p. 294), was secured, and it is suggested that the Rock Wren observed on San Nicolas Island is worthy of separation from the mainland bird "as a new species." The trip was made during the interval from May 11 to June 9, but the birds observed on a previous trip to San Clemente, March 26 to April 4, are also included. The notes on several of the Water Birds are of special interest. — J. A. A.

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Cory, C. B. *How to Know the Ducks, Geese and Swans*. Sm. 4to, pp. 95. Illustrated. Little, Brown & Co., Boston, 1897.

¹Report on the Birds recorded during a visit to the Islands of Santa Barbara, San Nicolas and San Clemente, in the spring of 1897. By Joseph Grinnell. 'Publication No. 1' of the Pasadena (California) Academy of Sciences. 8vo, pp. 26. August, 1897.

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CORRESPONDENCE.

Habits of the Maryland Yellow-throat.

EDITORS OF 'THE AUK':—

Dear Sirs:—If the correspondence pages of 'The Auk' are open to minor matters of this kind, I should like to ask if the note on 'Peculiar Nesting of the Maryland Yellow-throat' by Mr. Walton I. Whitehill¹ in the October issue of 1897 makes a correct statement in regard to the Maryland Yellow-throats of Minnesota when it says "the nests are usually to be found in dense woods far from water." This is certainly diametrically opposite to the habits of this bird in the eastern part of its range, for here in New England I am sure that all observers will bear me out in saying that *Geothlypis trichas* is very rarely and perhaps *never* found breeding at any distance from water.

Yours very truly,

FRANCIS H. ALLEN.

West Roxbury, Mass.

The Fauna of Muskeget Island—A Protest.

EDITORS OF 'THE AUK':—

Dear Sirs:—In a recent paper on the Terns of Muskeget Island,² Mr. George H. Mackay records the extermination of a family of Short-eared Owls that had established themselves on the island during the summer

¹[For WHITEHILL read MITCHELL, Whitehill having been printed through error.—EDD.]

² Auk, XIV, pp. 380-390. October, 1897.

of 1896. "I devoted much time in trying to shoot them" he says (on page 388); and in a footnote: "All but one were shot before the close of the season."

All friends of bird protection must recognize with gratitude the work done by Mr. Mackay and his associates in protecting the colonies of Terns and Laughing Gulls on Muskeget—work which can scarcely be appreciated by one who has not seen the teeming life which in summer now covers the barren sand hills of the island. But when bird protection results in the destruction of a family of Owls, which, notwithstanding its numerical insignificance, far outweighs in biological interest the largest Tern colony on the entire Atlantic coast, it is necessary to enter a protest.

The vertebrate fauna of Muskeget may be roughly divided into two groups: 1st, animals which there find conditions essentially normal and similar to those to which they are subjected throughout their range; and 2nd, animals which there find essentially abnormal conditions, that is, conditions which distinctly differ from those to which they are elsewhere exposed.¹ To the first class belong most of the breeding birds, among which may be mentioned: *Sterna hirundo*, *S. dougalli*, *S. paradisæa*, *Larus atricilla*, *Aegialitis meloda*, *Actitis macularia*, *Agelaius phoeniceus*, *Sturnella magna*, *Ammodramus caudacutus*, *A. sandwichensis savanna*, and *Melospiza fasciata*.² The coast form of the common toad probably belongs also in this category. In the second class we find the two mammals of the island, a Vole and White-footed Mouse, and only one bird, the Short-eared Owl. It is to the members of the second class that the chief interest attaches, because they are rapidly undergoing modification to fit them to the needs of their peculiar environment, while no such process is taking place among the inhabitants of the island that find there their normal surroundings. The process of change has progressed furthest with the Vole, *Microtus breweri* (Baird), which is now so much differentiated as to be readily separable from the wide-ranging *Microtus pennsylvanicus* of Nantucket, Martha's Vineyard and the adjacent mainland. The White-footed Mouse, *Peromyscus leucopus* (Rafinesque), is beginning to undergo a series of changes which if not interrupted will doubtless eventually result in the formation of a new species.³ A similar process would doubtless take place in the Owls if they were strictly protected and allowed to become firmly established on the island, for the bare glaring sand and scant vegetation among which

¹ A similar classification could probably be made with the plants, but here the preponderance of the first class would be even greater than in the case of the land Vertebrates.

² This list is taken from a summary of the Muskeget fauna published in 1896. Miller, Proc. Bost. Soc. Nat. Hist., XXVII, pp. 79-83.

³ See Miller, Proc. Bost. Soc. Nat. Hist., XXVII, p. 80.

they are there forced to live, places them in a very different environment from that of the rest of their kind. The importance of a careful historical record of a case like this can scarcely be estimated; and are ornithologists and intelligent bird protectors to be reckoned as one with market hunters and idle gunners in destroying the opportunities for obtaining such data?

That the Muskeget environment is sufficiently potent to produce a recognizable local race of the Short-eared Owl is shown by the former existence on the island of such a form. In his 'Birds of Eastern North America' (1881), Mr. C. J. Maynard says (p. 264): "I had an excellent opportunity of studying the habits of these Owls when camping . . . on the island of Muskeget during the early part of July, 1870. . . . During the first few hours of our visit, we discovered two or three huge nests placed in the tops of this dwarfed shrubbery [beach plum bushes], but could not, at first, make out to what birds they belonged. The island was swarming with three species of Terns, and, after a time, we saw a cloud of these birds gathering around some object which was suspended in air, but the Terns were so numerous that we could not see what it was engaged their attention until it moved onward, when we saw that it was a Short-eared Owl. We afterwards found that there was quite a colony of them on the place; in fact, we secured four or five specimens." On page 263, Mr. Maynard says that these specimens are so bleached as to appear nearly white in the distance. Of course, at so early a period in the summer, this bleaching could hardly have been due to a mechanically abraded condition of the plumage, and indeed Mr. Maynard has personally assured me that such was not the case, but that the birds represented a pale, resident race. This race has long since been exterminated. During my three visits to Muskeget in 1892 and 1893, I searched carefully, but unsuccessfully, for the birds, and am confident that I should have found them were they then on the island.

While the Owls unquestionably destroy many Terns, the latter are now so well re-established on Muskeget that a colony of the former would be no more a menace to their welfare than it was thirty years ago; and by helping to offer direct historical proof of the rapidity at which modification may progress under natural conditions, the Terns would be fulfilling a more important end than in gladdening the eye of the visitor to Muskeget, and the heart of the reader of Mr. Mackay's progress report.

Muskeget is probably only one among hundreds of natural biological laboratories. Ornithologists can do valuable work in preserving the natural conditions in such places; but a great danger is that, under the influence of æsthetic and sentimental considerations, bird protection will become so one-sided as to lose its scientific value.

Very truly yours,

GERRIT S. MILLER, JR.

Peterboro, New York.

NOTES AND NEWS.

AS THESE pages go to press we are in receipt, through the kindness of the publishers, of Miss Maria R. Audubon's 'Audubon and his Journals.'¹ A hasty examination of these sumptuously printed volumes is sufficient to show that Miss Audubon has presented us with a work of fascinating interest to all ornithologists and bird-lovers, and one which must also appeal strongly to the sympathies of the general reader. The story of his romantic life, told briefly in the first volume, is of absorbing interest. Following this are the European, Labrador, and Missouri River 'Journals,' and the 'Episodes,' the latter for the first time collectively reprinted from the first three volumes of the 'Ornithological Biographies.' The illustrations include a dozen portraits of Audubon, most of them heretofore unpublished, and also portraits of his wife, and his sons, John and Victor. There are also views of his mill in Kentucky and of his home mansions in Pennsylvania, besides various camp scenes and previously unpublished sketches of birds, including a pencil sketch of Townsend's Bunting. The geographical and zoölogical annotations by Dr. Coues add further interest to the work.

THE AUDUBON SOCIETY of the State of New York held a public meeting in the large lecture hall of the American Museum of Natural History on the afternoon of December 2. Addresses were made by Morris K. Jesup, President of the Museum and of the Audubon Society; Henry S. van Dyke and Frank M. Chapman, of the Society's Executive Committee; George L. Davis, representing the Superintendent of Schools of the city; and A. S. Bickmore of the Museum's Department of Public Instruction.

Mr. Jesup spoke of the work of the Society and its desire to create a public sentiment against feather wearing which will result in the proper enforcement of the laws protecting birds. Dr. van Dyke made a plea for the birds as "messengers of beauty and good cheer," and referred to their place in literature, concluding his eloquent address with the reading of two original bird poems. Mr. Chapman presented statistics showing the alarming extent to which the traffic in feathers has assumed, and urged, as a means of protecting our birds from wanton destruction, that their æsthetic and economic value be made a part of our common school curriculum. Mr. Davis expressed the willingness of the Board of Education to introduce bird-study in their course of instruction and dwelt upon the elevating and humanizing influence of nature studies, while Pro-

¹ Two vols. 8vo., illustrated. Charles Scribner's Sons, New York. 1897. Price, \$7.50 net.

fessor Bickmore exhibited a series of slides in illustration of a method by which bird-studies could be taught.

The meeting was attended by about 1000 people, doubtless the largest audience which has ever assembled in this country to listen to addresses relating to bird protection, and the interest and enthusiasm shown were excellent evidences of the appreciation of the importance of this subject.

MR. GEORGE K. CHERRIE has resigned his position of Assistant Curator of Ornithology in the Field Columbian Museum and in October sailed for Bolivar, Venezuela, which he proposes to make the base of explorations in the upper Orinoco region for a period of a year or more.

DR. J. BÜTTIKOFER, so well-known for his ornithological work at the Leyden Museum, has resigned his curatorship in that institution and accepted the appointment of Director of the Zoölogical Garden at Rotterdam. He has nearly completed his report on the ornithological results of the Borneo Expedition, which he accompanied as zoölogist.

DR. OTTO FINSCH, the eminent ornithologist and anthropologist, has been appointed, we are informed, to succeed Dr. Büttikofer at the Leyden Museum.

PROF. R. A. PHILIPPI, for forty-three years Director of the National Museum at Santiago, Chili, and well-known as an authority on Chilean ornithology, has retired from active work at the age of ninety years, his son succeeding him in the office of Director.

WE HAVE learned of the recent death of two of our Corresponding Members, but no details have yet reached us, — namely, Dr. A. J. Malmgren of the University at Helsingfors, Finland, and Dr. A. von Mojsisovics, Professor of Zoölogy and Comparative Anatomy at the University of Gratz, Austria. Some notice will be taken of their ornithological work in a later number of this journal.

THE FINAL plans for the location of the buildings, ranges, dens, aviaries and other enclosures for animals, and the ponds, walks, roadways, entrances, etc., for the Zoölogical Park in South Bronx Park, New York City, were lately submitted by the New York Zoölogical Society (see *Auk*, XIV, July, 1896, p. 344) to the Department of Parks and approved and adopted by the Park authorities. The Society has raised \$65,000 toward the \$100,000 necessary to receive from the city an appropriation of \$125,000 for laying out the grounds and providing drainage and water supply. The funds provided by the Society—namely, \$250,000 to be raised during the three year limit — are to be applied to the erection of buildings and the purchase of collections. It is a work that may well interest people

residing beyond the limits of New York City. The area allotted to the Zoological Park is four times larger than that of the largest zoological garden in Europe, and with the care that has been bestowed upon the plans, in order to secure the best results attainable, there is no reason why this country should not in due time be in possession of the best zoological garden in the world. It is hoped that the necessary financial support will be given the Society. The annual membership fee is \$10; \$200 constitutes the fee for a life membership; a gift of \$1000 renders the donor a patron, while a gift of \$5000 entitles the contributor to be enrolled as a founder. As neither the influence of the Society nor its work will be local, it is quite fitting that its appeal for financial aid should not be restricted within narrow limits. Persons interested in the work of the Society are invited to apply to the Director, Mr. William T. Hornaday, 69 Wall St., New York City, for copies of the Society's 'Bulletins,' giving reports of progress and plans of the work.

AN EDITION of 1000 copies of the report of the A. O. U. Committee on Protection of North American Birds will be reprinted from the present number of 'The Auk' for free distribution.

Owing to the pressure of business engagements Mr. William Dutcher has been compelled to resign from the chairmanship of the Committee and Mr. Witmer Stone has been appointed in his place. The Committee as now constituted is as follows:

WITMER STONE, *Chairman*, Academy of Natural Sciences, Logan Square, Philadelphia, Penn.

GEORGE H. MACKAY, 218 Commonwealth Av., Boston, Mass.

E. H. FORBUSH, Malden, Mass.

WILLIAM DUTCHER, 525 Manhattan Av., New York City.

MRS. OLIVE THORNE MILLER, 628 Hancock St., Brooklyn, N. Y.

MRS. JULIA STOCKTON ROBINS, 114 South 21st St., Philadelphia, Penn.

MISS FLORENCE A. MERRIAM, 1919 16th St., Washington, D. C.

DR. THEODORE S. PALMER, Biological Survey, Department of Agriculture, Washington, D. C.

RUTHVEN DEANE, 24 Michigan Av., Chicago, Ill.

MRS. E. IRENE ROOD, 552 Chestnut St., Chicago, Ill.

OTTO WIDMANN, Old Orchard, Mo.

MRS. LOUISE MCGOWN STEPHENSON, Helena, Ark.

LEVERETT M. LOOMIS, Academy of Sciences, San Francisco, Cal.

A. W. ANTHONY, San Diego, Cal.

REPORT OF THE A. O. U. COMMITTEE ON PROTECTION OF NORTH AMERICAN BIRDS.

By a resolution duly carried at the last annual meeting of the American Ornithologists' Union, the Committee on Protection of North American Birds was authorized to increase its numbers from members of the Society, and by such vested authority the following named persons were added to the Committee, viz.: Mr. Otto Widmann, Old Orchard, Mo.; Mr. A. W. Anthony, San Diego, Cal.; Mr. E. H. Forbush, Malden, Mass.; Mrs. E. Irene Rood, Chicago, Ill.; Mrs. Julia Stockton Robins, Philadelphia, Penn.; Miss Florence A. Merriam, Washington, D. C.; Mrs. Olive Thorne Miller, Brooklyn, N. Y.; Mrs. L. M. Stephenson, Helena, Ark., and Dr. T. S. Palmer, Washington, D. C.

All of the members have been actively engaged during the past year in advancing the work of this Committee in its various channels, and we feel that the very largely-increased interest taken in birds and in their protection has been in great measure the result of these efforts.

While thousands of leaflets have been distributed and column after column has appeared in the public press relative to the frightful cruelty necessitated by the use of wild birds' feathers for millinery ornaments, yet the plea of the great majority of the women who still continue to use feathers is that of ignorance. This is largely due, I think, to an unwillingness to assume an individual responsibility. They are like the Buddhist priest who had been preaching strongly against the use of animal food, although he sometimes ate it himself. In explaining what his religion required in the matter, he said: "I must not have any animal killed that I may eat it, yet if it is served at the table in any house where I am staying, and it is not provided expressly for me, but in the ordinary course of things, then I may eat of it, because then I am not personally responsible for the death of the animal." This certainly is the position that women occupy relative to bird slaughter; most of them know of the cruelty, and not only the cruelty but the injury to agricultural interests, yet they excuse themselves, as did the Buddhist priest, by saying: "The

birds are not killed for me personally; they would be killed at any rate." In other words, unless the wearer has a particular bird killed for her particular use, she will not assume any responsibility. It certainly is a curious inconsistency to visit a church or a lecture room and listen to a discourse on some philanthropic subject and note the extreme sympathy displayed by scores of women, while at the same time their hats are decorated with plumes and feathers that could only have been obtained by acts of the extremest cruelty.

The work is extending so rapidly, and interest is becoming so widespread, that it requires a greater amount of labor and time than the members of the Committee should be called upon to give. In fact, the work has now reached such a stage that, if possible, it should be transferred to some individual who could devote his or her whole time to it. The members of the Committee are all engaged in other pursuits, and therefore find it impossible to devote but a small amount of time to the work, and consequently cannot advance it as rapidly as would otherwise be possible; however, notwithstanding these drawbacks, your Committee feels that the year 1897 closes with an ample reward for the labor bestowed, and sees great cause for congratulation in the very greatly increased interest manifested.

With these few introductory statements, your Committee submits a résumé of the work done in each State.

MAINE.

Miss Edith J. Boardman of Brunswick, Maine, reports: "We are just about making an attempt to organize an Audubon Society. Professor Leslie A. Lee of Bowdoin College will assist, and we hope that we will be able to report a full organization in a few weeks. A systematic study of birds has not been introduced into the schools of the State, so far as I know, but occasional talks on birds have been given in the schools, and attempts have been made to call the scholars' attention to the subject, and an hour is occasionally given for recitations about them. No steps have been taken, however, towards establishing a Bird Day."

MASSACHUSETTS.

Audubon work in Massachusetts has advanced more rapidly and has attained a higher degree of efficiency than in any other portion of the country. The Secretary of the Society, Miss Harriet E. Richards, sends the following interesting statement of the work done by that Society during the past year, and of its present status.

"The Massachusetts Audubon Society began to enroll members February 10, 1896, each person paying one dollar for life-membership, excepting teachers and scholars, who paid twenty-five cents. February 10, 1897, the Directors reduced the membership fee to twenty-five cents, and created two new classes of members, viz., Associates, to pay one dollar annually, and Life Associates, to pay not less than twenty-five dollars at one time. The Associates are to be notified of all meetings and to receive all publications by mail. All the publications are free to members upon application. This plan of membership was inaugurated to induce more people to join as working members, and also to insure a permanent fund. While we realized the need of such a work, we did not know that so much interest would be taken in it by all classes, and so many ways opened to extend it.

"March 15, 1897, the day the new membership fee came into operation, the Society had 1284 members, 358 of which were school members. October 15, 1897, there were 1831 members, 364 associates, and 23 life associates. The Society has 110 local secretaries.

"In response to a Bird Day circular that we issued in March, we received letters from about twenty teachers, telling of the success of the plan in their schools. The past year the Secretary has addressed twenty-two clubs, schools, and societies in the interest of the work.

"We have freely distributed a circular stating the purpose of the society; also the following named leaflets: 'To the Members'; 'Hints to Bird Students'; 'To Save Our Birds'; 'The Baltimore Oriole'; and a card entitled 'The Bird's Christmas.' Also a Bird Day circular, reprinted from the Journal of Education; Miss Merriam's 'How Birds affect the Farm and Garden'; Mr.

Chapman's 'The Wearing of Heron's Plumes or Aigrettes'; 'An Artist's Appeal,' by Abbott Thayer, and many of the Government pamphlets. We have also prepared for sale an Audubon Calendar for 1898.

"In June a law was passed by our legislature to prohibit the use of Massachusetts song birds in millinery. It has been impossible to enforce this law, but its enactment has aroused much interest in the subject, and brought to the Society both friends and enemies.

"We are convinced that there is great need of the work, but are certain that it will take time and much patient, earnest effort to accomplish it, and only by the hearty co-operation of all persons interested in birds can we hope to overcome this long-established but barbarous custom of wearing feathers for ornamentation."

In addition to the work of the Massachusetts Audubon Society, Mr. George H. Mackay, of our Committee, has done exceedingly valuable work, which is detailed in his report herewith attached:

"In submitting my report for the year ending November, 1897, I beg leave to state that the number of things calling for experienced attention during the past year has been unusually large.

"After much thought, I formulated a protective bill for our birds in general, based on investigations made in Washington and elsewhere. This bill was presented in the Senate at the beginning of the session (being bill No. 17). After much preliminary work, under adverse conditions — my own senator and the House Chairman and Senate Chairman of the Fish and Game Committee being antagonistic — I succeeded in getting it through the Committee, and afterwards through the Senate, only to meet defeat later on in the House, in consequence of the influence of cold storage and market men, who were strongly opposed to the bill. The work entailed, under the circumstances, having been considerable, the disappointment was commensurate. I shall try it again the coming winter, which will be the third attempt.

"In order to better carry out certain protective work I have had a Deputy Fish and Game Commissioner appointed for the past two years.

"At the hearings given by the Committee on Fisheries and Game on the nineteen bills which were presented, some of them

with adjournments, I was present and spoke at eleven of them as your representative.

"No seriously-objectable legislation has been enacted during the past year, and the amount of ornithological information which has been imparted to some of our legislators at these hearings has been considerable, and cannot but result in good. Very late in the Session of 1897 a bill prohibiting the wearing of, or having in possession the body or feathers of, any of our birds now protected by law, was enacted. Although making a long argument in its favor, I doubted its efficiency. Complaint having been made to me regarding the killing of certain small birds near Boston, I made application to the Chief of the District Police, who furnished me with two officers in order to make investigations, but no evidence of sufficient strength to convict was obtained.

"In my last report I referred to a colony of Terns on Penikese Island, Massachusetts, which were in need of protection. I am happy to state that the owners of the island granted me all the authority asked for, and by the time the birds had commenced laying I had, in conjunction with Capt. W. H. Proctor of the Buzzard's Bay police boat, prepared and put up a number of signs on the island giving warning notices, printed in Portuguese and English, in parallel columns, against the taking of eggs, killing of birds, and trespassing on the island, Capt. Proctor having the island under surveillance during the breeding season. The result has been satisfactory; no eggs in quantity were taken, as has been the custom heretofore. The following letter from Mr. H. A. Homer, one of the two owners of the island, may prove of interest.

"I know of no attempts to gather eggs in quantities. Several parties have been to the island for a few eggs for curiosities, and some for scientific purposes, and they have taken them for such purposes, but only a few by each party. My man at the island lodged one gentleman who had spent a day at Gull Island and on Penikese Island investigating the Gulls: he was up until 11 o'clock that night making notes. I did not learn his name. He reported many dead Gulls, young and old, on the island, but I have failed to see many. A few have been killed by Hawks;

the sheep have trodden a few to death, and some have been crippled. These latter I have put to death, as they never could fly.

“‘I should judge, taking the number of old Gulls, that there was a greater percentage of young than for years. Old residents of Cutyhunk and the local fishermen say there are more Gulls than ever. Of course their judgment has little weight with me, but having given the matter some attention, I am willing to state that there are more old and many more young Gulls than last year.

“‘Two weeks ago, before the young could fly, I saw ten in a space about a yard square, and I counted 500 of the young, large and small, on the northern part of the island in a space of about five acres.

“‘These Gulls, when they begin to move about, walk in the sheep tracks and rest there and will not stir without being kicked out; they are consequently trodden upon by the sheep, and many get crippled in the wings. I made way with fifteen, last Saturday and Sunday, maimed in this way, and I saw more that I could not get, as they made for the water and swam away out of my reach.

“‘I have no means of estimating the number of young Gulls already on the wing, but there are enough to satisfy any lover of the creature. . . .

“‘A few Summer Yellow-legs came into the island Sunday but were driven off again by the Gulls, who pursued them in multitudes. Hawks are now also driven away, so that I think there will be a large increase in the Gulls, large enough to suit the desires of their best friends.’

“No decision having been handed down by the Supreme Court of Massachusetts regarding the status of the town of Nantucket and the owners of an undivided part of Muskeget Island, Massachusetts, until Sept 10, 1897, I found myself at the commencement of the breeding season in quite a quandary, especially as at the last moment the former warden was incapacitated for the situation, and another man (a fisherman), without consulting with me, had himself appointed without remuneration. Being somewhat doubtful of the results of such an appointment,

with the aid of a friend in Washington, I had the matter brought to the attention of the Hon. Secretary of the Treasury, as also of the General Superintendent of the Life Saving Service, who considerably granted permission to the Captain of the Life Saving Station on Muskeget Island to serve in the capacity of warden during the two months of June and July (the breeding season of the Terns and Laughing Gulls), when the life saving crew were off duty. In order that the Captain might have the necessary authority to arrest without warrant in this State, I made application that he be appointed a Deputy Fish and Game Commissioner, which application was most considerably granted by the Hon. E. A. Brackett, Chairman of the Commissioners on Island Fisheries and Game. Under this arrangement the birds breeding there have been cared for during the past season. I personally visited and remained in Muskeget and adjoining islands July 3, 4, and 5, 1897, and made, as has been my custom heretofore, a detailed examination of all the breeding ground. I found to my regret that great changes had taken place, especially on Muskeget Island. All the Laughing Gulls had abandoned their old breeding haunt, as had also pretty nearly all the Ternn; of the latter's eggs I did not observe over 100, where on July 8, 1895, I checked off 1280, and where in 1896 I found them too numerous to check off alone. On Gravelly Island, formerly the home of the beautiful Roseates, my especial pleasure and care, I am now compelled to write that this season they are only to be observed in greatly diminished numbers, this island, their particular resort, having been usurped to a large extent by the Common Tern. I find by actual count that the total nests and eggs noted here on July 3, 1897, are below what they were on July 26, 1896. On South Point Island, on July 4, 1897, there were 20 per cent. less nests, and 50 per cent. less eggs than on June 26, 1896. I found about 15 pairs of Laughing Gulls breeding here, and six or eight pairs breeding on Gravelly Island, which are all there are in this neighborhood at the present time.

"Last autumn the United States Government built a new life saving station (the former one having been burned a number of years ago) in the centre of the breeding resort of the Terns and Laughing Gulls on Muskeget Island proper. The occupants of

this station were on duty prior to, and for one month after the arrival of the birds, and probably as a consequence prevented them from using their old haunt for breeding purposes. An interesting question is, Where have these Muskeget birds gone? The figures show a decrease this season for all the other breeding grounds in Muskeget waters. I have not before noted fewer birds since the first few years when private protection was extended to them.

"The coming winter in Massachusetts promises to be as prolific of legislative schemes, good, bad and indifferent, as was last winter, and it requires experienced persons to give their time and attention to the same. I would respectfully suggest that whoever represents your Committee should be empowered by vote at the coming meeting of the American Ornithologists' Union to act for and represent absolutely the society in New England in all matters relating to bird protection and bird legislation. It is clearly impossible to present each matter in detail to the Committee for consideration, for the conditions are constantly changing. I see no other course for the American Ornithologists' Union, if it desires to maintain its present, and advance its future influence.

"In Massachusetts there has been heretofore two powerful factors in bird legislation, especially that affecting game birds, viz., the Fish and Game Protection Association, and the market-men and cold storage interests. It seems to be acknowledged that a third interest has been added, viz., the American Ornithologists' Union.

"Since spring shooting was prohibited in Massachusetts, Black-bellied Plovers, or Beetle Heads, as the young are called, have continued to increase in numbers, both in spring and autumn. This gain was noticeable in 1890, since which time large gains have been observed. I wish to call the attention of our western associates living in the States of Nebraska, Missouri (St. Louis), and Texas (Fort Worth), that parties there have been for a number of years killing and shipping thousands of Golden Plovers, Eskimo Curlews, and Bartramian Sandpipers in the spring, at the period when these birds are passing northward to their breeding grounds, many of them having eggs in the

ovaries at the time. For over two years I have been endeavoring to get our State law repealed which gives the right to sell the above birds during our close season. I have thus far been unsuccessful, one of the arguments of my opponents being that they will be shipped just the same to other States, and that unless the killing and shipping can be stopped it will prove of no avail.

"I called attention to this state of affairs several years ago; from that time to the present we have had none of these birds to speak of in New England, for the best of reasons, as it is unreasonable to expect the old birds and their increase to pass by our shore in the autumn on their return migration, going south, if you kill the old birds on the way north to breed. These birds have long since passed the danger mark, and if anything is ever to be done in their behalf, it should be done now."

Mr. Forbush, of the Committee, joined Mr. Mackay in urging the adoption by the legislature of his bill for the protection of birds, and has also given a large amount of information to speakers who have addressed Women's Clubs and other organizations in behalf of the protection of birds; he has also mailed reports and ornithological matter for use in school work. His own work as Ornithologist to the Massachusetts Board of Agriculture lies principally with the agricultural population, and he has spoken at farmers' meetings on the subject of the usefulness of birds, and has always advocated their protection; he also reports that the Massachusetts Fish and Game Committee has supplied him with notices warning against wild bird shooting, and these have been posted on the land of people who have been troubled by boys and gunners; he also reports that the Metropolitan Park Commissioner of Massachusetts has taken several tracts of woodland and set them aside as public parks, in which no gunning is allowed, and for the past three years the birds have been increasing in these parks. In the Middlesex Fells region, comprising thousands of acres, a large part of which has been seized by the Commissioner, Grouse, Quail, Crows, and Jays have greatly increased. The results of the protection of birds in these forest parks will be watched with interest.

NEW YORK.

Miss Emma H. Lockwood, Secretary of the Audubon Society of the State of New York, reports as follows :

"The Audubon Society of the State of New York for the protection of birds was organized February 23, 1897, and works in co-operation with the American Museum of Natural History, the President of the Museum, Mr. Morris K. Jesup, being also President of the Audubon Society.

"The Executive Committee believes that the work is essentially an educative work; therefore, to have any permanent result, the establishment of Bird Day in the schools throughout the State of New York, was made a primary principle of the organization. To attain this end the aid of Mr. Chas. R. Skinner, State Superintendent of Public Instruction was enlisted. He wrote a letter, addressed to the principals and teachers of the State, endorsing the work and aims of the Society; this letter was sent, together with a letter from the Chairman of the Executive Committee, and copies of the Society's prospectus, to 1167 superintendents and principals of schools throughout the rural districts of the State. Circular No. 10, a 'poster,' giving the law of New York on bird protection enacted May 22, 1897, was sent to 3611 postmasters in the State, enclosed with a letter from the Chairman requesting that the 'poster' be hung in the post-offices under their charge.

"Circular No. 4, 'The Wearing of Heron's Plumes or Aigrettes,' has been widely distributed by other State Audubon Societies, the Massachusetts society ordering over 1200 copies, and subsequently having 1000 additional copies printed under their own seal and heading. This circular has also been used by the Audubon Societies of New Jersey, the District of Columbia, Wisconsin and Iowa.

"The general literature of the New York Society has also been furnished on order from St. Louis, Baltimore, St. Paul, Tacoma (Wash.) and Redlands (Cal.).

"The Society has at present 241 members. The work of the past few months has been aimed directly at the cause of bird protection rather than towards the mere increase of member-

ship; it is hoped, however, that with the help of an efficient local secretary at all the important cities and towns of the State that this Society may soon be placed in the prosperous condition the work demands and deserves.

"The Society has issued the following circulars and leaflets:

- No. 1. Prospectus of the Society, giving its objects and principles.
- No. 2. A circular letter to 150 editors of newspapers in the State. By William Dutcher.
- No. 3. 'An Appeal to Boys.' By Mrs. J. A. Allen.
- No. 4. 'The Wearing of Heron's Plumes or Aigrettes.' By Frank M. Chapman.
- No. 5. 'An Artist's Appeal.' By Abbot H. Thayer.
- No. 6. 'Bird Day in the School.' Republished from Circular No. 17, of the United States Department of Agriculture, by permission.
- No. 7. 'Economic Value of Birds.' By Frank M. Chapman. Reprinted from 'Bird Life.'
- No. 8. Circular letter of Charles R. Skinner to Principals and Teachers of New York State.
- No. 9. Circular letter of the Chairman, sent with No. 8.
- No. 10. Poster — Extracts from the Law on Bird Protection.
- No. 11. Circular letter of Chairman to Editors, sent with No. 12.
- No. 12. Notice of Work and Aims of the Society, sent to Editors by the Chairman.
- No. 13. Circular letter of Chairman to the Postmasters of the State, sent with No. 10.
- No. 14. 'Elsie in Birdland, — An Appeal to Girls.' By Mrs. J. A. Allen
Of the above circulars 26,767 copies have been distributed."

In addition to the work done in the State of New York by the Audubon Society, the American Museum of Natural History conducts a department of educational work under the direct charge of Prof. A. S. Bickmore; this is devoted exclusively to the education of teachers in various branches, including the economic and æsthetic value of birds. Large numbers of accurately-colored lantern slides of birds have been prepared for distribution to the public schools throughout the State, thus bringing to the attention of the teachers and scholars, in a most satisfactory and beautiful way, this interesting and popular subject.

The Chairman regrets to report that the large colony of Terns on Great Gull Island, New York, that has been so carefully protected for a number of years, has, during the past season,

been entirely broken up, as the United States Government is now building upon that island extensive fortifications. While no adult birds, so far as learned, have been shot, yet no young birds have been hatched on that island during the past season.

The Chairman, accompanied by the State Game Protector for this district, visited a number of bird dealers in New York City during the past summer to ascertain whether wild birds were being caught and caged; they found a very few in the possession of dealers. Their attention was called to the new law and they were warned that any infraction of the same would be prosecuted.

RHODE ISLAND.

In October an Audubon Society was organized, with Dr. Hermon C. Bumpus of Brown University as President, and Mrs. H. T. Grant, Jr., 187 Bowen St., Providence, R. I., as Secretary. It has about 75 members. While they have thought best not to require any pledge from members, nor to especially mention their objection to the use of birds for millinery purposes, yet they feel that the subject is amply covered in Articles II and III of their By-Laws, which are as follows: "The purposes of the Society are declared to be the promotion of interest in bird life, the encouragement of the study of Ornithology, and the protection of wild birds and their eggs against unnecessary destruction. A declaration of sympathy with the objects of the Society shall be a sufficient requisite for membership therein.

CONNECTICUT.

Up to the time of making this report, an Audubon Society has not been organized, although considerable correspondence has been had on the subject by your Chairman, and there is every probability of one soon being formed.

PENNSYLVANIA.

Mr. Witmer Stone, of our Committee, reports as follows:

"A new game law was passed by the last legislature, which prohibits market gunning or the sale of game shot in the State,

and limits the number of game birds shot by one man in a single day.

"It also forbids the killing, selling, or having in possession any song or wild birds (except English Sparrow, Kingfisher, and some Hawks, Owls, and Herons) as heretofore. In the main, the law is excellent, but as no wardens are provided for, it cannot be as well enforced as it should be.

"The age at which permits for scientific collecting is granted is very properly reduced to 15 years, but the annual fee for the license is raised from one to five dollars, which is a very bad alteration, as many persons who cannot pay this high fee will be induced to collect without a license.

"The Pennsylvania Audubon Society has been active throughout the year, and has enrolled a membership of 2000, besides distributing about 20,000 circulars and pamphlets. The press throughout the State has given the Society cordial support, and has done much to spread its influence.

"Acting upon the suggestion of the United States Department of Agriculture, a bill providing for a Bird Day in the schools was introduced in the last legislature and was passed, only to be vetoed by the Governor."

NEW JERSEY.

Early in the year your Chairman visited Plainfield, N. J., at the invitation of some of its leading citizens, and lectured on the subject of bird protection before a large audience. On the 8th of May, 1897, the Audubon Society of the State of New Jersey was organized, with Alexander Gilbert of Plainfield, N. J., as President, and Miss Mary Abigail Mellick of the same place as Secretary; among its large number of Honorary Vice-Presidents is Governor John W. Griggs and Bishop Scarborough, also the President of the New Jersey Fish and Game Association.

Mr. Witmer Stone, of our Committee, who is also much interested in bird protection in lower New Jersey, reports as follows:

"In New Jersey, where no provision whatever is made for scientific collecting, a new bill was introduced during the year with the object of making such provision, and providing protec-

tion for certain birds not now protected. So many amendments were proposed, however, that it was thought, if passed, it would be worse than the present law, and it was dropped.

"The game wardens of New Jersey, under the direction of Mr. Charles A. Shriner, have done excellent work and have made so many arrests that very little illegal gunning is done, and many birds which are not really protected by the law are unmolested from fear that arrest may follow if they are harmed.

"The Gulls and Terns remain in about the same numbers as last year, but the Clapper Rails show clearly the effects of the enormous slaughter of September, 1896, and the high tides at the nesting season last summer, and have been very scarce."

MICHIGAN.

Mr. L. Whitney Watkins reports as follows: "I am pleased to state that a general feeling of enthusiasm prevails among the ornithologists of Michigan in the observance and enforcement of the laws protecting our native birds from wanton slaughter, and women wear birds upon their hats less than formerly; but here as elsewhere they are the last to think that the poor birds suffer on account of their own selfish vanity. The Michigan Academy of Sciences has appointed Prof. Walter B. Barrows of Lansing, Prof. Dean C. Worcester of Ann Arbor, and L. Whitney Watkins of Manchester, a Committee to advise and formulate better means for the protection of our song and insectivorous birds.

"The Michigan Ornithological Club, through its official quarterly bulletin, to which I have the honor of serving as editor-in-chief, has fearlessly and persistently stood for the protection of birds, and at the next annual meeting of our club we shall, I trust, start a branch of the Audubon Society, regarding which you have already heard from me.

"State Game and Fish Warden, Chas. S. Osborne of Sault Ste. Marie, who, like myself, is a member of both the above-mentioned societies, as well as of the American Ornithologists' Union, has done great good for the cause in the enforcement of the statute respecting our song and insectivorous birds, and in the great

care with which he issues permits for scientific collectors, and bars those who make skins to sell. These permits are usually limited to one or two counties, and to one pair of each species. They run from one month to a year. The Michigan statute reads: 'No person or persons shall at any time or in any manner whatever injure, kill or destroy or attempt to injure, kill or destroy any robin, night hawk, whippoorwill, finch, thrush, lark, swallow, yellow bird, blue bird, brown thrasher, cat bird, wren, martin, oriole, sea gull, woodpecker, bobolink or any song or insectivorous bird excepting blackbird, bluejay, English sparrow and butcher bird.' Their nests and eggs are also protected.

"I wish we could get an ornithologist in the legislature., You may depend upon me for anything possible."

DISTRICT OF COLUMBIA.

On May 18, 1897, an Audubon Society was organized, with Surgeon-General Geo. M. Sternberg, U. S. Army, as President and Mrs. John Dewhurst Patten as Secretary. In its prospectus particular emphasis is laid upon the fact that if women could only realize the cruelty necessary to obtain wild birds' feathers they would find it impossible to wear any feather to obtain which a bird has been killed; at the present time they have 74 members. The Secretary reports: "We have now in press two good leaflets, and it is proposed to have a circular letter from the Principal of the Public Schools, commending the objects of the Society, and to have a general meeting of the teachers, with a view of arousing their interest in the Society. We desire, if possible, to establish a normal course of ornithology similar to that in botany. I believe there is a growing sentiment in favor of bird protection, and I do not think there is as general use in millinery of wild birds' feathers as there was last season. We have one milliner on our list who has promised not to keep such feathers in stock; the others say they must supply what is demanded. We propose to have a pin for the Society as an especial attraction for children, with whom we feel the greatest work can be done for the future, especially if we succeed in getting a course of bird study in the schools. We do not feel at all discouraged but realize fully that all reforms are very slow."

ILLINOIS.

Mr. Ruthven Deane, of the Committee, reports as follows: "Since my last report, a year ago, affairs with regard to bird protection have assumed, in most particulars, an encouraging aspect, yet a few statements will show that our Committee and Audubon Societies still have plenty of work to accomplish. One of the most important features since my last report has been the organization of the Illinois Audubon Society on April 1, 1897. While the intervening summer months have scattered many of the officers and working committee, yet much good work has been accomplished. Several leaflets have been distributed, schools have been visited, and some already have adopted a Bird Day, and copies of the game laws have been posted in conspicuous places. At the present date the Society has a membership of 500 adults and 2500 children in the public schools, and has established 14 branch societies. On October 28, the first public meeting was held and was well attended. In the past few weeks I have carefully observed the present style of ornamentation for hats and bonnets; I find that not less than 75 per cent. are trimmed with feathers, but only 25 per cent. are those of wild birds, and in no instance did I detect a song bird. The fall fashions here call eagerly for feathers of our game birds and of several species of our Hawks and Owls, yet there are hundreds of styles made up from the feathers of our domestic fowls and pigeons dyed in all colors of the rainbow. Now as to the aigrette, — I am informed by the proprietor of one of our largest wholesale millinery establishments that the demand for these plumes has been greater this fall than for several years, and that the supply was fully equal to the demand, their aigrette sales this fall amounting to \$5,000. It is very discouraging to learn this fact, as more stress has been laid upon this species than any on the list. The general influence of Audubon Societies is, I am sure, having its effect upon the small boy, and many cases are cited where he now loves and respects the bird, when a short time ago, with blow-gun and sling shot, he persecuted them. The heronries on the Kankakee River, which I reported upon last year, have been unmolested the past season, and the birds have been unusually abundant there. Since

bird protection has been so thoroughly brought before the general public, it has awakened an interest in hundreds who previously were but casual observers, but are now true bird lovers, and look at nature's gifts in a different light than ever before. From my correspondence with the secretaries of your various eastern societies, it is delightful to see what extensive progress they are all making. We must all work to increase our memberships, for the more we can enroll, the greater will be the scope of our work."

In addition to the work done by Mr. Deane and the Illinois Audubon Society, I wish to call particular attention to the excellent individual work done by one of the members of the Union, the Rev. George B. Pratt of Chicago; his example could be followed to great advantage by the members of the Union in other portions of the country. He says in a recent letter: "I addressed 75 women and 50 children the other day on bird protection, and next week I go for four days to a girls' school at Kenosha, Wisconsin, to take classes out for observation; I have done this for three years past, and have reaped splendid results in awakening interest. In connection with my sacred church, God gives me magnificent blessings among the kingdom of the blessed birds.

WISCONSIN.

The work in this State has progressed very rapidly and systematically, and is in a more advanced condition than in many of the other States.

Prof. H. Nehrling, an Active member of the Union, reports as follows: "An Audubon Society was founded April 20, 1897, with Mrs. Mary Gifford Peckham of Milwaukee as President, and Miss Madge Anderson of the same city as Secretary. Mrs. Henry F. Whitcomb, one of the Directors, has given bird lectures for three or four years, making protection her main plea, and it is due to her good work, that an Audubon Society could be founded. Like societies have been created in four cities in Wisconsin.

"To Mrs. J. J. Upham, the wife of a former governor, is due the passage of a law for Bird Day, now celebrated in our State, together with Arbor Day.

"The bad small boy still continues to kill birds with his sling shot, and as a rule the police do not stop it; several letters have been written to the Chief of Police in reference to the matter, and also to the Game Warden, asking protection for the birds, but so far without any result.

"A few weeks since the Audubon Society had an exhibition of millinery without birds, except feathers of ostriches and game birds; shortly after this display one of the largest firms in the city announced that they would sell only feathers that were not objectionable. Several of our clergymen have complied with the wishes of our Society and have spoken on the subject of Bird Protection.

"Since my taking charge of the Public Museum, I have made it my special object to interest the schools in our birds and in bird protection; the teachers call upon me frequently in order to obtain information about our more common species. During the last few years 50 sets of birds, comprising nine familiar species, have been mounted and are now used in nature study in the public schools.

"Our present Superintendent of schools is especially interested in this bird work, and he does all he can to make it valuable and pleasant to the children."

A law establishing a Bird Day was passed in 1889, and was amended in 1897, authorizing the Governor to designate and set apart a day each year for its observance. In conformity with the law, Governor Edward Scofield issued the following proclamation:

"I do hereby designate and set apart Friday, April 30 next, as Arbor and Bird Day, and recommend that all public schools, colleges and other educational institutions of the State and citizens generally do observe the same in a proper manner.

"I recommend that the day be devoted to the planting of trees, shrubs and flowers in school grounds and public parks, to the end that these public grounds may be permanently beautified; and I also recommend that in all school and other public exercises held upon that day special attention be paid to our native birds, in order that the children of the State may learn to find pleasure in a knowledge of the habits and characteristics especially of the various song birds, and that there may be cultivated a higher regard for bird life.

"*In Testimony Whereof*, I have hereunto set my hand and caused the Great Seal of the State of Wisconsin to be affixed. Done at the Capitol, in the City of Madison, this 24th day of March, in the year of our Lord one Thousand Eight Hundred and Ninety-seven.

[*Seal*]

EDWARD SCOFIELD.

By the Governor:

HENRY CASSON, Secretary of State,"

Mr. George A. Morrison, of Fox Lake, gives a very interesting account of the influence of Bird Day on the boys of his town: "Bird Day was observed here this year April 30, in connection with Arbor Day. This was in compliance with an act passed by our last legislature, setting aside a day for the special study of birds and trees in the schools of the State.

"The exercises were held in the college chapel, and all departments of the public school participated. At the close of the program I gave a little talk on birds, their habits, and need of protection.

"For some time previous there had seemed to be a growing interest manifested on the part of a number of the boys in the characteristics and habits of several of our more common birds. This program seemed to awaken them still more, for, in the succeeding weeks, during the spring migration, they often came to my store, asking about the song of some bird they had undoubtedly frequently heard before, but now it was heard in a different way; it had a meaning, and they learned to recognize the songs of several birds. One species with which they became acquainted last winter was the Evening Grosbeak, a little flock of which remained with us from February 13 to April 20, so the boys had ample opportunity to observe the habits of this winter visitor.

"During the nesting season I think there were but few nests robbed, and fewer birds killed just for fun, which goes to show that the small boy, however malicious, can be taught to respect and love the friends of the air, if the right course be taken.

"In the near future I hope to see a society formed here for the study and protection of our birds. This may be accomplished this winter, as several have indicated a willingness to lend their assistance in this movement. I hope to be able to give you a more complete report next year."

MINNESOTA.

Mr. T. A. Abbott, Secretary of the Minnesota Society for the Prevention of Cruelty, writes: "An Audubon Society has been started and partly organized here, but a full list of officers has not as yet been named, but will be chosen at the November meeting.

"The Local Society for the Prevention of Cruelty has about 400 members, and has had printed and posted in conspicuous places throughout the city and suburbs notices warning all persons against killing wild birds. The study of birds has been taken up in some of the schools in connection with humane societies established among the children, but this is the work of individual teachers and has not as yet been generally taken up, though I hope it will be. No formal or organized effort has been made towards establishing Bird Day in the schools, though certain teachers have attempted to add something in the way of instruction in the exercises of Arbor Day."

Miss Bertha L. Wilson, Supervisor of Nature lessons in Minneapolis, writes: "During the past year we have introduced the study of birds into our public school system; indeed, the primary grades have studied them for several years. Although we have no regular Bird Day, I may say that all the spring days, from Easter on, are Bird Day; then also in the fall. Although we pay more attention to insects, we refer to the migration of birds and speak of them often. I can safely say that many of the teachers, as well as the children, are really interested in this subject. The State law is generally enforced in regard to game birds on their breeding ground, but I think very little attention is paid to the protection of small birds, and I think many useful ones with their nests are destroyed by boys and would-be collectors."

IOWA.

A great deal of good work has been done in Iowa, principally, however, by individuals, as no State Audubon Society has as yet been formed. Mr. M. H. Leitner of Sioux City, Iowa, wrote in August for the literature of the Audubon Societies, and said: "I am very much interested in the bird questions of to-day. I am

teaching in the schools of Sioux City, and at a meeting of the N. W. Iowa Teachers' Association I will be able to reach one-fourth of the entire State; there were over 1000 teachers in attendance last year. Through the public schools on Bird Day we ought to be able to turn public opinion against the wearing of feathers, wherein death or cruelty is necessary to obtain them."

One of the members of the Union, Mr. Wm. E. Praeger of Keokuk, has done a large amount of excellent work, especially in lecturing in his locality, and also in contributing matter on bird protection to the public press of Iowa. He summarizes the work as follows: "I do not know that an Audubon Society has been started, but I have heard that the subject of bird protection is being agitated in a number of large cities in the State. Fort Madison has the honor of being the first city in Iowa to establish a Bird Day in its public schools; this was in 1896; last May an afternoon was devoted to birds in our Keokuk schools; the observance was a success, and Bird Day will probably be an annual institution here and in other cities of our State. I had the pleasure of speaking twice in public on the subject of bird protection last spring, and I am glad to know that my efforts have been rewarded, not only by the observance of Bird Day, but by the awakening of considerable interest in and sympathy for the birds. This shows itself in many ways. I may mention that a few days since a leading milliner in the town told me that the reduction in the demand for feathers was very noticeable in his business, many ladies refusing to wear them. He also said that if he could only get rid of his present stock he would not be sorry for this, as ribbons and flowers were more easily and profitably handled than feathers."

Miss J. E. Hamand, a member of our Union, of Schaller, Iowa, has also done excellent individual work; she writes: "A local Audubon Society was founded in June of the present year; we have had four regular meetings, and have a membership of 104; we have secured the co-operation of our teachers, who are taking up the work in our schools. *Our milliners gave no bird orders this fall.* I have talked at two County teachers' meetings when 60 or 70 were present; also distributed the United States Department of Agriculture Circular No. 17, with bird leaflets.

"At a District Convention, representing 32 clubs, held at Cherokee, a paper prepared by our President was read and discussed. I then made a plea for our fellow citizens of the air and told of the work of our Society; this was followed by the reading of a poem — 'A Robin Pie,' the story was called, as this prompted the poem — and it was found it would make an excellent leaflet, which will soon be published. The following resolution was unanimously carried: 'Resolved: That this Association is in thorough sympathy with the work of the Audubon Society, discouraging the use of aigrettes and birds for ornamentation, and condemning the cruel destruction of bird life to supply the demands of fashion.'

"Several ladies expressed their determination to organize Audubon Societies in their various towns.

"Permission was obtained from the Superintendent of the Northern Iowa Division of the Chicago and Northwestern R. R. to post the literature of the Audubon Society in the depot; the Chapman aigrette leaflet was framed, and a large number of other leaflets were hung from corners like almanacs. We hope to get a bill through the legislature this coming winter establishing Bird Day in the schools. I also hope to address the County Farmers' Institute in January, realizing that many farmers have destroyed, through ignorance, their best friends, Hawks and Owls. At that time we hope to have enough of Miss Merriam's pamphlets to distribute with the Circular No. 54 of the Agricultural Department. We have had cards printed, with sections of the bird laws on them, which were posted in our parks and elsewhere. I am hoping another year we will have a State Society. We feel greatly indebted to the secretaries of the various State Societies for their timely and prompt responses, their suggestions and leaflets and their many encouraging words."

ARKANSAS.

Mrs. Louise McGowen Stephenson of Helena, a member of our Committee, has by her own unaided efforts, aroused a sentiment for bird protection, by her continuous and emphatic appeals through the public press, sufficiently strong to carry successfully

through the legislature a bill which was subsequently signed by the Governor and made a statute March 12, 1897. It is, as follows:

"It shall be unlawful for any person within the State of Arkansas to kill, wound or injure any wild bird other than the game birds, or to destroy, disturb or rob the nest of any such bird, or to sell or expose for sale, either dead or alive, any such bird, and it shall be unlawful for any railroad company, express company, steamboat company or other company or corporation, or private person, their agents, employes or servants to have in possession or receive for transportation or carriage or for any other purpose whatever, any such birds or eggs; but this section shall not only apply to English sparrows, crows, blackbirds, hawks, owls, eagles and other bird of prey, nor shall it prohibit any person from killing any such birds on his own premises, when in the act of destroying fruit or other crop."

In justice to Mrs. Stephenson's excellent work I cannot do better than to give in full the two reports she has made to your Committee. She writes: "How to protect the birds has been with me the subject of grave consideration for many years, and although willing and anxious to render service, I did not see how to go about it until Circular 17, U. S. Agricultural Department, came to me. The plan there suggested seemed a feasible method of popularizing bird protection. Fifty-six of them were sent out September, 1896, with the following circular of my own:

"DEAR SIR:—I enclose a circular with the plea that its subject matter be given careful attention.

"If you recall the fact that there are very few Mockingbirds left in this country to day, you will not only agree something should be done to protect this small remnant, but that the surest way to accomplish that something is to teach the young people to spare the lives of all birds.

"Believing that with your aid, and that of other progressive teachers, we can make Arkansas the Banner State in this line, I beg you will permit me to add your name to the list of those willing to cooperate with Messrs. Palmer and Babcock in their noble work.'

"But two replies were received to these, so from that date personal letters were enclosed, and more circulars were asked for

from time to time. Altogether 114 letters have been sent to residents of 65 Counties on the subject of Bird Day in schools. In about half of these it was announced that an effort would be made to secure favorable legislation during the winter, and those addressed were asked to interest the members from their district in the subject of bird protection. As a result of the interest awakened, in March, 1897, the amendment to the game law was passed. Since that time I have been in communication with the Hunters' Clubs in Arkansas, urging them to join with other friends of the song birds in having the law printed in large type and posted in every post office in the State. Thus far polite answers have been received promising cooperation.

"As to Bird Day in the schools, much interest has been aroused and I trust will result in good. The State Superintendent of Public Instruction called attention to the matter through the public print, and also arranged interesting programs for five consecutive Fridays, beginning with March 26 and ending April 23, which, at my request, he designated Bird Day proper.

"So far as the legislation is concerned, I am aware that little can be hoped for in the way of bird protection unless the law is reinforced by healthy public sentiment. This, in my opinion, can be aroused in no better way than through the medium of schools."

Later Mrs. Stephenson writes: "There are some experiences which are so hopeful in their promise for the future that I venture to send them. Late in September I received a letter from a friend who is the principal of a female seminary in Tacoma, Washington, which ran thus: 'I see in the last report of the National Science Club that you have succeeded in getting Bird Day inaugurated as a regular thing in the public schools in Arkansas. Is it asking too much for you to tell me just what is done on this day and just how it is carried out? I am down for a paper on birds in our club, and as I have no personal observations to report I am trying to get what information I can on the subject that may be of interest?'

"You would smile if you could see the list of questions which she added, since they covered two pages of her letter, but the above is all that seems pertinent. Of course, I answered at once,

and made as many suggestions as I could, as well as enclosing a very comprehensive plan suggested by our State Superintendent.

"The next experience had to do with the articles I am preparing every week, and as you already have copies up to date of the papers which contain them, you will be able to judge how very effectual my clippings may prove. After the first article I met an acquaintance who did not wait to greet me, but exclaimed impulsively: 'Oh, Mrs. Stephenson, I read your article, and am so glad you wrote it. I never felt like wearing a bird, but did not realize how cruel it was before.'

"The past week, after the appearance of 'The Cruel Through Ignorance' article, a fashionable acquaintance said: 'Those articles you are writing are doing a great deal of good, I know. Why, I took out my last winter's hat, with its aigrettes and birds, and I could not think of wearing it again after the "As Others See Us" appeared.'

"A friend in a neighboring village told of his boy's reading it at their Friday exercises in their schools, and that as soon as they had finished, the principal gave the school a genuinely fine lecture on the subject of cruelty toward birds.

"These are little straws, but they help to show how small a wind sets them in motion, do they not?

"These last quotations from a letter would not be made if it were not that the position of the writer makes its promise mean very much; she is a wealthy young lady who supports, as well as teaches in, a Kindergarten in Leavenworth, Kansas, among the poorest class of miners; she knew nothing whatever of birds, but in her anxiety to instill her poor little barbarians with some ideas of mercy, sought to learn about the birds so that she might interest them through her personal observations. She sent for Chapman's 'Hand-Book' and, with opera glasses to aid us, we had many a lovely day with the birds. She said, 'How I did enjoy my summer, and how much you did for me. But your reward will not come here, unless you count it reward to enthuse one more to bird study.'

"These are all the crumbs which have come back, but I know there must be more, and shall do all I can in every way possible. My efforts to unite with the Hunters' Clubs for the enforcing of

the law have not resulted in anything save some promises of aid and have helped in interesting other clubs; that was last spring. After a few weeks I shall begin again to claim their attention."

MISSOURI.

In Missouri no organized effort has been made, although some individual work has been done. Mr. O. Widmann, of our Committee, reports: "No Bird Day has been established in Missouri, neither do I think that, unassisted by regular teaching, it would be of much more good than creating another half-holiday for the teachers and pupils, something like Arbor Day. Mr. Baskett made some effort in its behalf in the Missouri 'School Journal' last June, and he says that the press of the State took it up for a little while, but nothing came of it. The introduction of the study of birds in schools has never been discussed anywhere in our State, which does not yet seem to be ripe for such accomplishments. There is no zoölogy taught in our schools, not even in the high schools.

"No attempt has been made toward establishing an Audubon Society, but in the show-windows of the St. Louis milliners, more birds are to be seen on the hats than ever before, and in their advertisements they boast of an immense stock and very low prices. We have certainly bird laws in the State of Missouri, but who ever heard of them? They are good enough as far as they go, though they make bad blunders, as for instance placing the Meadow-larks among the game birds. These bird laws have never been enforced, and nobody pays the least attention to them. In some Counties they try to stop Sabbath shooting; that is about as far as they can hope to get. The hunting itself, and the slaughtering of innocent birds, is such a sacred privilege of the son of this 'land of the free' that nobody dares to interfere. Our colored brothers are especially prominent in the enjoyment of this privilege, and with many of our white as well as colored citizens the right to slaughter is the ideal prerogative of the American and the true exponent of liberty. The acknowledgment of this right to hunt and shoot seems to be universal. Only a few weeks ago a five year old girl was killed by

a negro shooting Meadow-larks on a vacant lot in the city of Kirkwood, a suburb of St. Louis. Nobody thought of prosecuting the negro; it was simply an accident. The negro saw the children, but his excuse was, that he did not know his gun would carry that far.

"What will you do with Bird Days and Audubon Societies among a population which allows negroes to shoot Meadow-larks on city lots, and does not even think of punishing those who carelessly destroy precious human life.

"Finally you ask for suggestions: here is one of a radical nature. Get Congress to put enough taxes on the manufacture and sale of gunpowder to raise its price to at least two dollars a pound, and put a revenue stamp on every shell and cartridge. If the government can control the liquor traffic why not also gunpowder? The one is as bad as the other."

COLORADO.

Early in the year the Chairman addressed a letter to the President of the Woman's Club, Denver, Colorado, asking for the co-operation of that Club to create a sentiment against the use of feathers of all wild birds for millinery purpose. The matter seems to have been taken up by the Colorado Humane Society.

Mrs. Francis B. Hill, the Secretary of the El Paso branch, writes: "The subject of Mr. Dutcher's letter is one that has engaged the earnest attention of this society for several years past; literature on the subject has been generously distributed, and the sympathy of the local press enlisted, which has helped the cause by frequent articles. It has been brought to the notice of the superintendents of all the schools, and this year our society was instrumental in organizing an Audubon Society, of which Mr. F. O. Wood of Colorado Springs is President."

Mr. Whitehead, the General Secretary of the State Society, writes: "In Denver we have done about what has been done in Colorado Springs except that we have no organized Audubon Society. Two ordinances, copies of which are attached, we had passed last spring, and they are read occasionally in all the city schools with remarkable results.

"Ordinance No. 29. Series of 1897.

"Be it enacted by the City Council of the City of Denver:

Section 1.—It shall be unlawful for any person within the corporate limits of the city of Denver to have in possession or to make, use, sell or offer for sale, any instrument, toy or weapon commonly known as a pea-shooter, sling or beany, made for the purpose of throwing projectiles by means of elastic rubber cords or bands, or other india rubber parts, by means of springs, or any air gun, whether such instrument is called by any name above set forth or by any other name; and every person convicted of a violation of this ordinance shall be fined in a sum not less than one dollar nor more than twenty dollars for each offense.

"Ordinance No. 30. Series of 1897.

"Be it enacted by the City Council of the City of Denver:

Section 1.—It shall be unlawful for any person at any time within the corporate limits of the city of Denver to frighten, shoot at, wound, kill, capture, ensnare, net, trap, or in any other manner molest or injure any robin, lark, whip-poor-will, finch, sparrow, thrush, wren, martin, swallow, snow-bird, bobolink, red-winged blackbird, crow, raven, oriole, kingbird, mocking bird, song sparrow, or other song or insectivorous bird; or in any manner molest or injure the nest, eggs, or young of any such bird, or to have in possession the nest, eggs, young, or body of any such bird.

Section 2.—Any person violating the provisions of Section 1 of this ordinance, upon conviction, shall be fined in a sum not less than one dollar nor more than fifty dollars for each offense.

"The daily press will publish anything asked relative to bird protection which is furnished them."

CALIFORNIA.

In this State we have two members of the Committee, Mr. A. W. Anthony and Mr. Leverett M. Loomis. Mr. Anthony reports as follows: "A few shipments of plumes have been sent to this port (San Diego), from western Mexico, but I have been unable to learn the extent or nature of the consignment. The milliner who received them denies that any were received; nearly all who handle plumes seem ashamed of the business and anxious to cover their guilt.

"I did not visit the region of any Heron rookeries last summer,

so I could not learn of any parties who might be killing plume birds. One boat with two men has been in the Gulf of California for two seasons; I cannot learn the full extent of their slaughter until their return."

Mr. Loomis reports: "The California Academy of Sciences's bill for the protection of birds, before the last legislature, did not reach the stage of final consideration. I was absent at the East, and therefore could not press the matter; the bill will be introduced again at the next session, over a year hence. Some protection, however, was secured through another bill that was in advance of the Academy's. Fewer Murre's eggs were offered for sale last season than usual; one large dealer in poultry and eggs, in the Union Square market, told me that he had ceased to handle Gulls' eggs since the Government had prohibited their collection on South Farallon Island, for those obtained from other localities were generally stale when they reached the market. With the passage of a State law prohibiting the sale of wild birds' eggs, the sea birds on this coast will be comparatively free from molestation, except where rookeries are easy of access. I am not aware that any special effort is being made to introduce the study of birds into the schools, or that there is any movement towards forming Audubon Societies other than the one at Redlands."

Your Chairman, in his report of 1896, referred to an appeal that had been made to the Lighthouse Board to prohibit the collection of eggs on the South Farallon Islands by the lighthouse keepers stationed there. I am pleased to state that the Board, in response to our appeal, prohibited in the most positive manner the collecting of eggs by the following order: "The Board directs that all egg and bird business of the kind in question on the Farallon Islands, California, so far as outside parties are concerned, be prohibited; as to the collection of eggs and birds by the lighthouse employes, you are also directed to take steps for the proper regulation of this matter, subject to the Boards' approval." Signed, Geo. F. F. Wilde, Commander, U. S. Navy, Naval Secretary.

By a further order, dated December 10, 1896, directed to Commander Frank Curtis, U. S. Navy, Inspector, 12th Lighthouse District, the lighthouse keepers themselves were debarred from

collecting eggs under the following order: "The Board desires that the lighthouse keepers shall be prohibited from engaging in the business of collecting or selling wild birds' eggs on these islands, in any form." Signed, Geo. F. F. Wilde, Commander, etc.

At the suggestion of Mr. Anthony, your Chairman addressed a letter to Porfirio Diaz, President of the Republic of Mexico, calling his attention to the fact that white and Indian hunters from the United States were visiting Mexico for the purpose of plume hunting. It was called particularly to his attention that Mexico derived no benefit from the traffic, but suffered a direct loss. No response to this appeal was received, but as it was quite detailed, it no doubt had its effect.

NORTH CAROLINA.

Mr. T. K. Bruner, Secretary of the North Carolina Department of Agriculture, attempted in the last session of the legislature to have an act for the preservation of birds passed. The penalties were a little too severe for the temper of the people, so the passage was lost. The next session of the legislature is not held until January, 1899.

In its report for 1896 your Committee stated that it firmly believed that the true solution of the problem would be the education of the children of our schools in every grade from the kindergarten to the college, not only in the æsthetic but the economic value of our birds. They are more firmly convinced that this is the true solution than ever before. Everything points to it as the only means through which the desired end may be attained. It is found to be extremely difficult to convince the great bulk of the adults of the present day of the economic value of birds, and that they should not be destroyed. In a generation it will be possible to so change this sentiment that every adult will recognize the importance of birds as aids in preserving the economic balance of nature.

Miss Merriam, of our Committee, who unfortunately is not able to be present at this meeting, very forcibly expressed her sentiments on this subject in the following letter; it is so earnestly and clearly expressed that I submit it in detail:

"In the days of the old original Audubon Society, I did quite a little work up here [Lewis Co., N. Y.], and got two or three local secretaries for the neighboring villages who secured goodly membership lists.

"With the revival of the work I have tried to bring the people back into line, and in that attempt have had my eyes opened to the value of local work such as we did in those days. In our village nearly *all the members have broken their pledges* and are so utterly indifferent to the matter that the former secretary thinks she could not get them back on the membership list even if the fee were only twenty-five cents. She says they were *never* very much interested, and now care nothing about the subject.

"Now we don't want to repeat this history, and as Chairman of the Protection Committee I look to you to warn our workers from the past and help them to work more wisely in this new movement that promises to go from coast to coast.

"We do not want it to be a passing enthusiasm, but a vital growth. Bird protection must be the outgrowth of *public intelligence* rather than sentiment; this intelligence can be secured by lectures and the wide distribution of *economic* statistics such as the New York Society is sending out, and such as every society should disseminate; and it can also be secured by teaching the school children the interest and value of birds. Make the adults intelligent; interest the children in birds. Bird protection should be like vaccination; as soon as people understood the value of that there was no further question. When people are taught the economic value of birds—that bird destruction is a matter of dollars and cents to them—bird protection will be assured; and when children are interested in birds they will not want to shoot them with sling shots.

"Just here we have a mission, an opportunity which I hope very earnestly you will point out to all the newly formed and forming societies—an opportunity to make our movement *Audubon* work in very fact as in name—to spread the true spirit of Audubon, to implant the love of nature in our children's hearts. Let our Audubon societies be not only for the Protection, but the *Study of Birds*. *Let us work to introduce bird study into the schools along with botany.*

"There is a new and wide-spread interest in Nature Study as a means of observation, etc., in our schools, and in our country schools at least there is every opportunity for bird work. But while bird songs are coming in through the windows, the children's attention is concentrated upon a *crab*, which inland children may know only through books.

"Country children are peculiarly in need of this bird work. Boys need the guidance of a teacher to give names and point to their own discoveries, to change their egg collecting interest to a *naturalist's* interest. And girls need the teaching to give them an out-door interest in Nature: they are our future farmers' wives; more farmers' wives go insane than any other class—from dearth of interests. Here we have an opportunity to give them something that will lend value and meaning to woods and fields—that will widen their horizons and lighten their drudgery.

"A man was lecturing in Albany this summer on nature work, going from place to place in the State with the avowed purpose of interesting country people in the life about them in order to prevent their exodus to the cities. This is certainly a wise sociological movement, and we have it in our power to help enormously.

"In fact, this Audubon movement in the United States may be an ephemeral enthusiasm, or it may do most important humanitarian work. It may mean nothing, or it may mean great things.

"I would urge wise, broad, philanthropic work by every society that is formed. Specifically, I would say: 1. Let us disseminate economic literature. 2. Let us establish bird work in the schools on a footing with botany.

"To make this bird work possible, we must teach the teachers, and so must aim to establish bird courses in the normal and high schools, have bird examinations part of the Regent's examinations; every teacher who gets a certificate should have enough knowledge of the subject to teach the children the common birds; field work, of course, should be the basis in every possible case."

Your Committee has the following recommendations to make to the members of the American Ornithologists' Union:

1. — That it is the duty of each member to instruct himself as to the economic value of birds by reading all the publications on

the subject, that he or she may be prepared to instruct and interest anyone with whom they may be thrown in contact.

2. — Members should also be prepared and willing at all times to address farmers' institutes, women's clubs, and any other gathering of people where the subject of bird protection and the value of birds to the people can be urged.

3. — Another duty is for members of the Union to urge upon their representatives in their State legislatures the advisability of passing proper laws for the protection of birds, including the so-called birds of prey; this can be done on the ground of their economic value to the agricultural districts if for no other reason.

4. — Members should take every opportunity to talk to educators urging them to teach the children about bird life, and to that end should prevail upon as many teachers as possible to join this society. Could the Union have four or five thousand members scattered throughout the country, largely among the teachers, it would be financially able to have a department devoted exclusively to the furthering of this special work.

5. — Your committee find that the bird laws of the various States are so unlike in their provisions, and in most cases so worthless, that it urgently recommends that it would be advisable to have made a complete compilation of the laws relative to birds throughout the United States.

6. — After such compilation, the Committee further recommends that a draft of a uniform law be made that can be safely recommended for enacting in all portions of North America. This law should, if possible, prevent the transportation by public carriers or individuals from one State to another.

7. — It is further recommended that a uniform law establishing Bird Day in conjunction with Arbor Day be urged for passage in all the States where such a law does not now exist. The very simple but clear law now on the statute books of Wisconsin is recommended as a model. It has been urged that two holidays are objectionable, therefore, as Arbor Day and Bird Day are allied in purpose a law making both observable on the same day is advisable. The following is recommended.

ARBOR AND BIRD DAY LAW.

Section 1. The governor is hereby authorized to set apart each year by proclamation, one day, to be designated an Arbor and Bird Day, and to request its observance by all public schools, private schools, colleges and other institutions, by the planting of trees, the adornment of school and public grounds, and by suitable exercises having for their object the advancement of the study of arboriculture, the promotion of a spirit of protection to birds and trees, and the cultivation of an appreciative sentiment concerning them.

Section 2. This act shall take effect and be in force from and after its passage and publication.

8. — Your Committee further recommends that as far as possible uniform circulars and leaflets should be issued by the Audubon Societies; to that end a clearing house should be established and the leaflets and circulars be printed from stereotyped plates, thus securing published matter at the minimum of cost.

9. — Your Committee further recommends that an Audubon badge be adopted and issued instead of certificates of membership. These might be worn and thus serve to remind the Audubon member of his or her pledge, and they would also excite interest in others and thus spread the good influence of the work.

10. — Your Committee further urgently recommends that all permits issued by the proper authorities for collecting birds and their eggs should be absolutely confined to scientific purposes, and that in no sense should they be construed to permit collecting for commercial purposes. And further, it is the duty of all members of the American Ornithologists' Union and members of Audubon Societies to urge this matter upon the authorities issuing such licenses.

Finally, your Committee finds itself in great need of aid in many parts of the United States and calls for volunteers for the work from members of the Union. Such members would be expected to assume the direction of the work in the manner outlined above in territory assigned to them.

Very respectfully submitted,

WILLIAM DUTCHER,
Chairman.

OFFICERS AND COMMITTEES OF THE AMERICAN ORNITHOLOGISTS' UNION. 1897-98.

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MERRIAM, C. HART, } <i>Vice-Presidents</i>	" 1898.
RIDGWAY, ROBERT, }	
SAGE, JOHN H., <i>Secretary</i>	" 1898.
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CORY, CHARLES B.	" 1898.
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ALLEN, J. A., <i>Editor</i>	November, 1898.
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UNION. DECEMBER, 1897.

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MACFARLANE, ROBERT, Winnipeg, Manitoba.....	1886
MADARÁSZ, DR. JULIUS VON, National Museum, Budapest, Hungary.	1884
MENTZBER, DR. M., Imperial Society of Naturalists, Moscow.....	1884
MEYER, DR. A. B., Director of the Royal Zool. Museum, Dresden....	1884
NAMIYE, M., Tokio.....	1886
NICHOLSON, FRANCIS, Oakfield, Ashley Road, Altrincham, England.	1884
OATES, EUGENE WILLIAM, Mandalay, Burma.....	1884
OUSTALET, DR. EMILE, Jardin des Plantes, 55 Rue de Buffon, Paris.	1888
PALMÉN, Prof. J. A., Helsingfors, Finland.....	1883
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ELROD, Prof. M. J., Univ. of Montana, Missoula, Montana.....	1892
EMERSON, CHARLES J., Stoneham, Mass.....	1896
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EMLEN, ARTHUR COPE, Awbury, Germantown, Philadelphia, Pa....	1896

EVERMANN, Prof. BARTON W., U. S. Fish Comm., Washington, D. C.	1883
FANNIN, JOHN, Provincial Museum, Victoria, B. C.	1888
FANNING, JED FRYE, 216 Spring St., Portland, Me.	1895
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FARWELL, Mrs. ELLEN DRUMMOND, Lake Forest, Ill.	1896
FERGUSON, CHAUNCEY COFFIN, Merrimac, Mass.	1894
FERNALD, ROBERT HEYWOOD, 366 Amesbury Av., Cleveland, Ohio.	1890
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FLINT, WILLIAM R., Oakland, Cal.	1890
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GOLDMAN, EDWARD ALPHONSO, Alila, Cal.	1897
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LOOMIS, JOHN A., Paint Rock, Concho Co., Texas.....	1887
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LOWE, WILLOUGHBY P., Goodpasture, Colo.....	1893
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MAILLIARD, JOSEPH, San Geronimo, Cala.....	1895
MAITLAND, ROBERT L., 10 E. 35th St., New York City.....	1889
MALI, CHARLES M., 93 Willow St., Brooklyn, N. Y.....	1889
MARBLE, CHARLES C., 6126 Ingleside Av., Chicago, Ill.....	1897
MARCY, Prof. OLIVER, Evanston, Ill.....	1892
MARSH, DANIEL J., Springfield, Mass.....	1894
MASON, EDWARD CAMPBELL, 76 Johnsons Park, Buffalo, N. Y.....	1888
MASON, HOWARD HARRIS, 34 Mawney St., Providence, R. I.....	1897
MASTERMAN, ELMER ELLSWORTH, New London, Ohio.....	1897
MAULE, WILLIAM MARIS, Swathmore College, Pa.....	1895
MAXON, WILLIAM RALPH, 132 Main St., Oneida, N. Y.....	1894
MAY, FRANK DWIGHT, Jr., 17 Huntington St., Hartford, Conn.....	1894
MAYNARD, COLTON, 1407 15th St., N. W., Washington, D. C.....	1895
MCCOOK, PHILIP JAMES, Cambridge, Mass.....	1895
MCCORMICK, LOUIS M., Glen Island, N. Y.....	1892
MCGREGOR, R. C., Palo Alto, Cala.....	1889
McILHENNY, EDWARD AVERY, Avery, La.....	1894
McKENZIE, PETER, 4492 St. Catharine St., Montreal, Can.....	1896
McLAIN, ROBERT BAIRD, Palo Alto, Cala.....	1893
MERRIAM, Miss FLORENCE A., 1919 16th St., N.W., Washington, D.C.....	1885
MERRILL, HARRY, Bangor, Maine.....	1883
METCALFE, WILLIAM C., 21 Cortlandt St., New York City.....	1886
MILLER, GERRIT SMITH, Jr., Peterboro', N. Y.....	1886
MILLER, HARRY EDWARD, Derby Conn.....	1892
MILLER, JAMES HENRY, Lowville, N. Y.....	1894
MILLER, Mrs. OLIVE THORNE, 628 Hancock St., Brooklyn, N. Y.....	1887
MILLER, WALDRON DEWITT, Plainfield, N. J.....	1896
MILLS, HARRY C., Unionville, Conn.....	1897

MITCHELL, WALTON I., Santa Fé R. R., East Las Vegas, New Mex.....	1893
MOORE, J. PERCY, Wayne, Pa.....	1886
MORCOM, G. FREAN, 406 So. Broadway, Los Angeles, Cala.....	1886
MORISON, GEORGE ABBOT, 34 Shepard St., Cambridge, Mass.....	1896
MORRELL, CLARENCE HENRY, Pittsfield, Me.....	1897
MORRIS, GEORGE SPENCER, Olney, Philadelphia, Pa.....	1887
MORRIS, ROBERT O., Springfield, Mass.....	1888
MORRISON, GEORGE A., Fox Lake, Wis.....	1891
MUMMERY, WALTER S., Flint, Mich.....	1895
MURDOCH, JOHN, Roxbury, Mass.....	1883
NACHTRIEB, Prof. HENRY F., Univ. of Minn., Minneapolis, Minn.....	1892
NASH, HERMAN W., Pueblo, Colorado.....	1892
NEAL, ALBERT EDWARD, 98 Exchange St., Portland, Me.....	1896
NEWBURY, FREDERICK EARL, 105 Mathewson St., Providence, R. I.....	1897
NICHOLS, EUGENE C., Flushing, N. Y.....	1895
NICHOLS, JOHN M., Peabody, Mass.....	1890
NORRIS, GUY BRUNAUGH, Garden City, Kansas.....	1894
NORRIS, Rev. JAMES AVERY, Glen Cove, N. Y.....	1894
NORRIS, J. PARKER, 723 Walnut St., Philadelphia, Pa.....	1886
NORTON, ARTHUR H., Westbrook, Maine.....	1890
NORTON, ARTHUR HENRY WHITELEY, Hanover, N. H.....	1894
NORTON, RICHARD, Cambridge, Mass.....	1888
NOWELL, JOHN ROWLAND, Anderson, S. C.....	1897
OBERHOLSER, HARRY C., Dept. of Agriculture, Washington, D. C.....	1888
O'CONNOR, HALDEMAN, 25 No. Front St., Harrisburg, Pa.....	1896
OGDEN, Dr. HENRY VINING, 300 Goldsmith Bldg., Milwaukee, Wis.....	1897
OLDS, HENRY WORTHINGTON, Woodside, Md.	1896
O'NEIL, EDWARD, Sewickley, Allegheny Co., Pa.....	1893
ORTH, GEORGE S., 341 6th Ave., Pittsburgh, Pa.....	1892
OSBORN, CHASE SALMON, Sault Ste. Marie, Mich.....	1893
OSBURN, Rev. WILLIAM, Nashville, Tenn.....	1890
OSGOOD, FLETCHER, Chelsea, Mass.....	1897
OSGOOD, WILFRED HUDSON, Dept. of Agriculture, Washington, D. C.....	1893
OWEN, CHARLES C., East Orange, N. J.....	1896
OWEN, Miss JULIETTE AMELIA, St. Joseph, Mo.....	1897
OWEN, VIRGIL WILLIAMS, P. O. Box 774, Los Angeles, Cala.....	1894
PAGE, Mrs. ALICE WILSON, 9 Riedesel Ave., Cambridge, Mass.....	1896
PAINÉ, AUGUSTUS G., Jr., 17 W. 45th St., New York City.....	1886
PALMER, Dr. THEODORE S., Dept. of Agriculture, Washington, D. C.....	1888
PALMER, WILLIAM, U. S. Nat. Mus., Washington, D. C.....	1888
PALMER, WILLIAM M., 84 Beekman St., New York City.....	1896
PAPE, CHARLES WESLEY, Manhattan, Kansas.....	1896
PARKER, J. GRAFTON, Jr., 100 Washington St., Chicago, Ill.....	1894
PARKER, WENDELL PHILIPS, 89 Lincoln St., Worcester, Mass.....	1897
PATTIE, FRANK BENJAMIN, Valley Spring, Cala.....	1897
PAYNE, E. B., Catlin, Ill.....	1896

PEABODY, Rev. P. B., Hallock, Minn.....	1891
PEABODY, WILLIAM RODMAN, Cambridge, Mass.....	1890
PENNOCK, CHARLES J., Kennett Square, Chester Co., Pa.....	1888
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PERRY, JOSEPH FRANCIS, 198 Pearl St., Providence, R. I.....	1897
PETERSON, J. P., West Denmark, Polk Co., Wis.....	1885
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PHILIP, HOFFMAN, Metropolitan Club, Washington, D. C.....	1897
PHILLIPS, A. H., Princeton, N. J.....	1891
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PIERS, HARRY, "Stanyan," Willow Park, Halifax, N. S.....	1891
POMEROY, HARRY KIRKLAND, P. O. Box 575, Kalamazoo, Mich.....	1894
POPENOE, Prof. EDWIN A., Topeka, Kan.....	1888
PORTER, LOUIS H., 313 W. 75th St., New York City.....	1893
POTTER, RAYMOND B., Nyack, N. Y.....	1895
POWERS, WILLIAM LINCOLN, Gardiner, Maine.....	1895
PRAEGER, WILLIAM E., University of Illinois, Urbana, Ill.....	1892
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PRENTISS, D. W., Jr., 1218 9th St., N. W., Washington, D. C.....	1890
PRICE, WILLIAM W., Stanford University, Cal.....	1893
PURDY, JAMES B., Plymouth, Mich.....	1893
RALPH, Dr. WILLIAM L., 26 Court St., Utica, N. Y.....	1888
RANN, Mrs. MARY L., Manchester, Iowa.....	1893
RATHBUN, FRANK R., 42½ Franklin St., Auburn, N. Y.....	1883
RATHBUN, SAMUEL F., Seattle, Wash.....	1893
RAWSON, CALVIN LUTHER, Norwich, Conn.....	1885
READ, ALBERT M., 1140 15th St., N. W., Washington, D. C.....	1895
REAGH, ARTHUR LINCOLN, 39 Maple St., West Roxbury, Mass.....	1896
REDFIELD, Miss ELISA WHITNEY, 107 No. 34th St., Philadelphia, Pa.....	1897
REDINGTON, ALFRED PORTT, Santa Barbara, Cal.....	1890
REED, J. HARRIS, Beverly, N. J.....	1890
REED, HOWARD S., 1320 Gaylord St., Denver, Colo.....	1894
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RHOADS, SAMUEL N., Haddonfield, N. J.....	1885
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RICHARDSON, W. M., Am. Mus. Nat. Hist., New York City.....	1891
RICKER, EVERETT WILDER, Jamaica Plains, Mass.....	1894
RIDGWAY, JOHN L., U. S. Geol. Surv., Washington, D. C.....	1890
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ROWLAND, RUSSELL STURGIS, Ann Arbor, Mich.	1895
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ROZYCKI, STEPHEN, Navy Dept., Washington, D. C.	1894
RUSSELL, WATERMAN S. C., Manchester-by-the-Sea, Mass.	1896
RUSSELL, WILLIAM BLACK, Fiskdale, Mass.	1893
SAGE, HENRY M., Albany, N. Y.	1885
SAMPSON, WALTER BEHRNARD, Stockton, Cala.	1897
SANFORD, FRANK ELWOOD, Supt. Public Schools, La Grange, Ill.	1897
SAVAGE, DAVID LEWIS, Salem, Iowa.	1894
SAVAGE, JAMES, 134 Abbott St., Buffalo, N. Y.	1895
SCHALER, JOHN, Stamford, Conn.	1893
SCHRAGE, E. B., Pontiac, Mich.	1895
SCHURR, THEODORE A., Pittsfield, Mass.	1888
SCHWAB, Rev. LAWRENCE H., 101 Lawrence St., New York City.	1892
SCUDDER, BRADFORD A., Taunton, Mass.	1893
SCULL, ANDREW STEWART, 262 Mt. Vernon St., Camden, N. J.	1897
SHARPLESS, ROBERT P., Elgin, Ill.	1894
SHATTUCK, GEORGE CHEEVER, 506 Craigie Hall, Cambridge, Mass.	1896
SHEPPARD, EDWIN, Acad. Nat. Sci., Philadelphia, Pa.	1892
SHERILL, W. E., Haskell, Texas.	1896
SHIELDS, ALEXANDER M., Crocker Bldg., San Francisco, Cala.	1896
SHIELDS, GEORGE O., 19 W. 24th St., New York City.	1897
SHOEMAKER, FRANK H., Hampton, Iowa.	1895
SHORES, Dr. E. I., West Bridgewater, Mass.	1883
SHRYOCK, WILLIAM A., 823 N. Broad St., Philadelphia, Pa.	1893
SILLOWAY, PERLEY MILTON, Rood House, Ill.	1896
SIMPSON, R. B., Arches, West Va.	1895
SMALL, ALBERTO WILLIAM, Antrim, N. H.	1895
SMALL, ERNEST WILLIAM, Monmouth, Me.	1895
SMITH, HORACE G., 2918 Lafayette St., Denver, Colo.	1888
SMITH, Dr. HUGH M., 1248 New Jersey Ave., Washington, D. C.	1886
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SMITH, S. SIDNEY, 59 Wall St., New York City.	1888
SMYTH, Prof. ELLISON A., Jr., Agr. and Mech. Coll., Blacksburg, Va.	1892
SMYTH, HIRAM G., Locust Ave., Troy, N. Y.	1896
SNYDER, WILL EDWIN, Beaver Dam, Wis.	1895
SORNBORGER, JEWELL D., Cambridge, Mass.	1888
SOUTHWICK, E. B., Arsenal Bldg., Central Park, New York City.	1888

SOUTHWICK, JAMES M., Mus. Nat. Hist., Providence, R. I.....	1896
SPAULDING, FRED. B., Lancaster, N. H.....	1894
SPELMAN, HENRY MUNSON, Cambridge, Mass.....	1883
SPRAGUE, JOHN C. 93 Wall St., New York City.....	1891
SPRATT, CHESMAN CHADWICK, North Bridgton, Maine.....	1894
STANTON, Prof. J. Y., Bates College, Lewiston, Me.....	1883
STEPHENS, FRANK, San Diego, Cal.....	1883
STEPHENSON, Mrs. LOUISE MCGOWN, Helena, Ark.....	1894
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STONE, DWIGHT D., Lansing, N. Y.....	1891
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STREATOR, CLARK P., Santa Cruz, Cal.....	1889
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STRONG, REUBEN M., Oberlin, Ohio.....	1889
STUDER, JACOB HENRY, 114 Fifth Ave., New York City.....	1888
STURTEVANT, EDWARD, Brookline, Mass.....	1896
SURFACE, HARVEY ADAM, Cornell University, Ithaca, N. Y.....	1897
SUTTON, GEORGE BYRON, Newark Valley, N. Y.....	1896
SWINBURNE, JOHN, Guernsey, England.....	1887
TALLEY, Prof. THOMAS WASHINGTON, Tallahassee, Fla.....	1896
TATLOCK, JOHN, Jr., Mutual Life Ins. Co., New York City.....	1887
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TEST, Dr. FREDERICK CLEVELAND, 4048 Indiana Ave., Chicago, Ill.....	1892
THAYER, ABBOTT H., Scarborough, N. Y.....	1896
THOMAS, JOHN, Sharon, Pa.....	1895
THOMPSON, ERNEST E., Tappan, N. Y.....	1883
THOMSON, Prof. GEORGE S., Walden, Colo.....	1892
TODD, LOUIS M., Calais, Me.....	1887
TODD, W. E. CLYDE, Dept. of Agriculture, Washington, D. C.....	1890
TOPPAN, GEORGE L., 294 Newbury St., Boston, Mass.....	1886
TORREY, BRADFORD, Wellesley Hills, Mass.....	1883
TOWNSEND, CHARLES H., U. S. Fish Comm., Washington, D. C.....	1883
TOWNSEND, WILMOT, Bay Ridge, N. Y.....	1894
TREAT, WILLARD E., Silver Lane, Conn.....	1885
TREMBLAY, Dr. JOSEPH EUCLIDE, Esquimaux Point, Quebec, Can.....	1895
TROMBLEY, JEROME, Petersburg, Mich.....	1885
TROSTLER, ISADOR SIMON, 4246 Farnam St., Omaha, Neb.....	1897
TROTTER, Dr. SPENCER, Swarthmore College, Swarthmore, Pa.....	1888
TUTTLE, Dr. CARL, Berlin Heights, Ohio.....	1890
UPHAM, Mrs. MARY C., Marshfield, Wis.....	1897
VAN CORTLANDT, Miss ANNE S., Croton-on-Hudson, N. Y.....	1885
VAN DENBURG, JOHN, Acad. Sci., San Francisco, Cal.....	1893
VAN SANT, Miss ELIZABETH, City Hall, Omaha, Neb.....	1896
VAN WINKLE, EDMUND, Warsaw, Ind.....	1894

VAUGHAN, CLIFFORD WHEATON, 47 W. 83d St., New York City.....	1894
VELIE, Dr. J. W., St. Joseph, Mich.....	1886
VICKERS, ERNEST W., Ellsworth, Ohio.....	1896
VILARO, Dr. JUAN, Tampa, Fla.....	1888
WALCOTT, ROBERT, 11 Waterhouse St., Cambridge, Mass.....	1893
WALES, EDWARD H., Hyde Park, N. Y.....	1896
WALKER, Dr. R. L., Carnegie, Pa.....	1888
WARREN, Dr. B. H., West Chester, Pa.....	1885
WARREN, OSCAR BIRD, Hibbing, Minn.....	1892
WATERMAN, WILLIAM, Hay Springs, Neb.....	1896
WATERS, EDWARD STANLEY, Holyoke, Mass.....	1894
WATKINS, L. WHITNEY, Manchester, Mich.....	1894
WEST, JAMES A., Bloomington, Ill.....	1896
WEST, LEWIS H., Roslyn, Queens Co., N. Y.....	1887
WHEELER, Rev. HARRY EDGAR, Huntsville, Ala.....	1897
WHEELER, JOHN B., East Templeton, Mass.....	1897
WHITAKER, WILLIAM LINCOLN, Cedar Grove, Philadelphia, Pa.....	1894
WHITE, FRANCIS BEACH, Cambridge, Mass.....	1891
WHITCOMB, MRS. ANNABELL COOK, 721 Franklin St., Milwaukee, Wis.....	1897
WHITMAN, Prof. CHARLES OTIS, Univ. of Chi., Chicago, Ills.....	1896
WHOLEY, W. N., 78 Grape St., Rochester, N. Y.....	1891
WICKS, M. L., Jr., Los Angeles, Cal.....	1890
WILBUR, ADDISON P., Canandaigua, N. Y.....	1895
WILCOX, T. FERDINAND, Princeton, N. J.....	1895
WILDE, MARK L. C., Merchantville, N. J.....	1893
WILLIAMS, J. BICKERTON, 32 University St., Montreal, Can.....	1889
WILLIAMS, ROBERT S., 408 1st Ave., S. Minneapolis, Minn.....	1888
WILLIAMS, W. J. B., Holland Patent, N. Y.....	1893
WILSON, Miss LILIAN BARTON, 728 Marcy Av., Brooklyn, N. Y.....	1897
WILSON, SIDNEY S., St. Joseph, Mo.....	1895
WINTLE, ERNEST D., 11 Hospital St., Montreal, Can.....	1887
WOOD, NELSON R., Smithsonian Institution, Washington D. C.....	1895
WOODRUFF, FRANK M., Acad. Sci., Lincoln Park, Chicago, Ill.....	1894
WOODRUFF, LEWIS B., 14 East 68th St., New York City.....	1886
WOODWORTH, Mrs. NELLY HART, St. Albans, Vt.....	1894
WORCESTER, Prof. DEAN C., Ann Arbor, Mich.....	1895
WORTHEN, CHARLES K., Warsaw, Ill.....	1891
WORTHINGTON, R. B., Dedham, Mass.....	1893
WORTHINGTON, WILLIS W., Shelter Island, Suffolk Co., N. Y.....	1889
WRIGHT, FRANK S., 51 Genesee St., Auburn, N. Y.....	1894
WRIGHT, Mrs. MABEL OSGOOD, Fairfield, Conn.....	1895
WRIGHT, Miss NORA GIRALDA, Olneyville, R. I.....	1896
WRIGHT, SAMUEL, Conshohocken, Pa.....	1895
YEATON, ARTHUR CHARLES, Deering, Me.....	1895
YORKE, Dr. F. HENRY, Foosland, Ill.....	1891
YOUNG, CURTIS CLAY, 395 Clermont Ave., Brooklyn, N. Y.....	1891

DECEASED MEMBERS.

ACTIVE MEMBERS.

Date of Death.

BAIRD, SPANCER FULLERTON.....	Aug. 19, 1887
BENDIRE, CHARLES E.....	Feb. , 1897
Goss, N. S.....	March 10, 1891
HOLDER, JOSEPH B.....	Feb. 28, 1888
JEFFRIES, JOHN AMORY.....	March 26, 1892
WHEATON, JOHN M.....	Jan. 28, 1887

HONORARY MEMBERS.

BURMEISTER, HERMANN.....	May 1, 1892
GÄTKE, HEINRICH.....	Jan. 1, 1897
GUNDLACH, JUAN.....	March 14, 1896
GURNEY, JOHN HENRY.....	April 20, 1890
HUXLEY, THOMAS H.....	June 29, 1895
KRAUS, FERDINAND.....	Sept. 15, 1890
LAWRENCE, GEORGE N.....	Jan. 17, 1895
PARKER, WILLIAM KITCHEN.....	July 3, 1890
PELZELN, AUGUST VON.....	Sept. 2, 1891
SCHLEGEL, HERMANN.....	Jan. 17, 1884
SEEBOHM, HENRY.....	Nov. 26, 1895
TACZANOWSKI, LADISLAS.....	Jan. 17, 1890

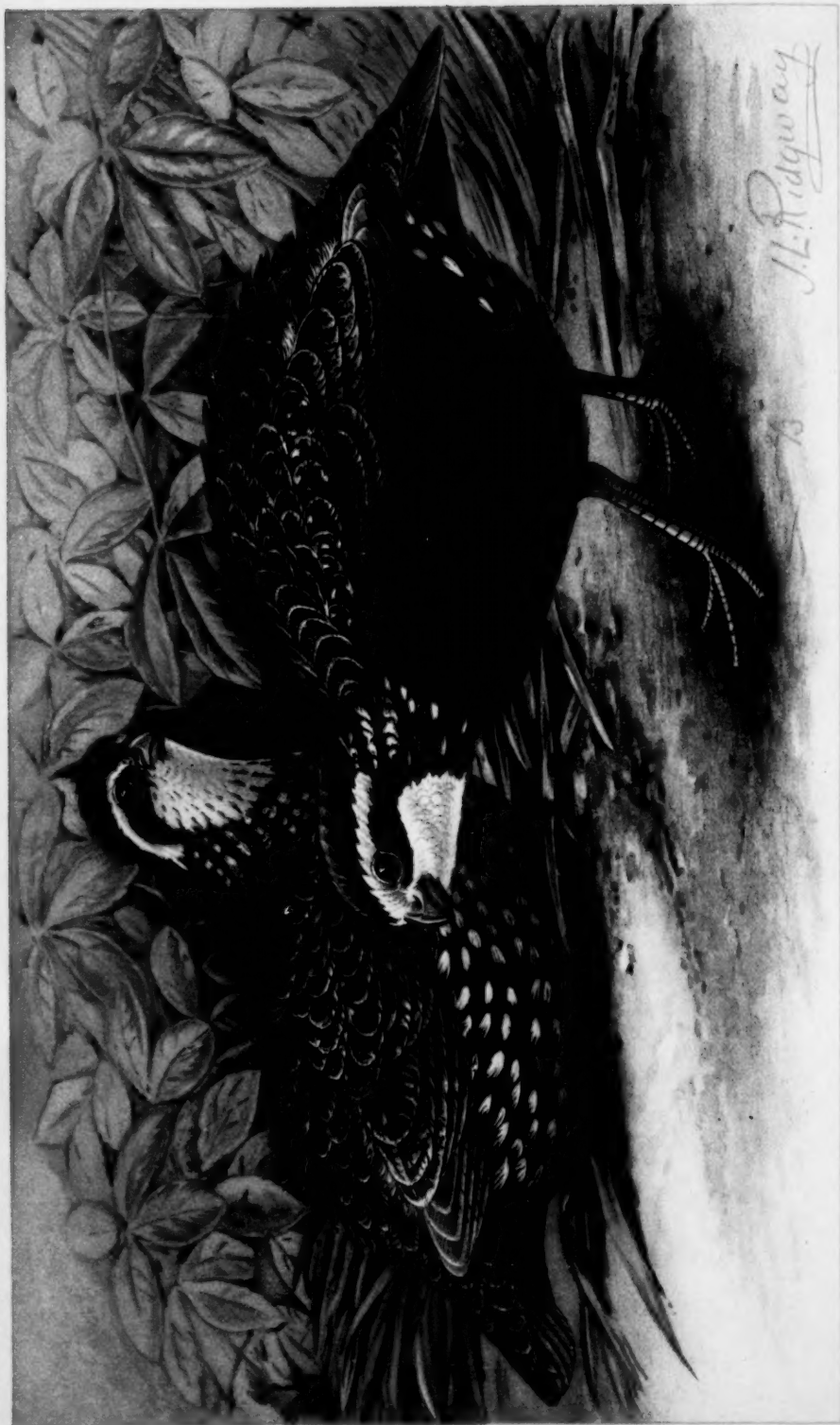
CORRESPONDING MEMBERS.

BALDAMUS, EDUARD.....	Oct. 30, 1893
BLAKISTON, THOMAS W.....	Oct. 15, 1891
BOGDANOW, MODEST N.....	March 4, 1888
HAAST, JULIUS VON.....	Aug. 15, 1887
HARGITT, EDWARD.....	March 19, 1895
HOMER, E. F. VON.....	May 31, 1889
LYTTLETON, THOMAS, LORD LILFORD.....	June 17, 1896
MARSCHALL, A. F.....	Oct. 11, 1887
MALMGREN, ANDERS JOHAN.....	, 1897
MIDDENDORFF, ALEXANDER THEODOR VON.....	Jan. 28, 1894
MOSJISOVICS, F. G. HERMANN AUGUST.....	Aug. 27, 1897
PREJEVALSKI, N. M.....	Oct. 20, 1887
PRYER, HARRY JAMES STOVIN.....	Feb. 17, 1888
SCHRENCK, LEOPOLD VON.....	Jan. 20, 1894
SEVERTZOW, N.....	Feb. 8, 1885
STEVENSON, HENRY.....	Aug. 18, 1888
WHARTON, HENRY T.....	Sept. —, 1895

ASSOCIATE MEMBERS.

ADAMS, CHARLES F.....	May 20, 1893
ALLEN, CHARLES SLOVER.....	Oct. 15, 1893
ATKINS, H. A.....	May 19, 1885
AVERY, WILLIAM CUSHMAN.....	March 11, 1894
BECKHAM, CHARLES WICKLIFFE.....	June 8, 1888
BILL, CHARLES.....	April —, 1897
BOLLES, FRANK.....	Jan. 10, 1894
BREESE, WILLIAM L.....	Dec. 7, 1889
BROKAW, L. W.....	Sept. 3, 1897
CAIRNS, JOHN S.....	June 10, 1895
CAMPBELL, ROBERT ARGYLL.....	April —, 1897
CORNING, ERASTUS, JR.....	April 9, 1893
COE, W. W.....	April 26, 1885
ELLIOTT, S. LOWELL.....	Feb. 11, 1889
FAIRBANKS, FRANKLIN.....	April 24, 1895
GESNER, A. H.....	April 30, 1895
GOSS, BENJAMIN F.....	July 6, 1893
HOADLEY, FREDERIC H.....	Feb. 26, 1895
HOWLAND, JOHN SNOWDON.....	Sept. 19, 1885
JENKS, JOHN W. P.....	Sept. 27, 1894
JOUY, PIERRE LOUIS.....	March 22, 1894
KUMLIEN, THURE.....	Aug. 5, 1888
LAWRENCE, ROBERT HOE.....	April 27, 1897
LINDEN, CHARLES.....	Feb. 3, 1888
MABBETT, GIDEON.....	Aug. 15, 1890
MARIS, WILLARD LORRAINE.....	Dec. 11, 1895
MINOT, HENRY DAVIS.....	Nov. 13, 1890
NICHOLS, HOWARD GARDNER.....	June 23, 1896
NORTHROP, JOHN I.....	June 26, 1891
PARK, AUSTIN F.....	Sept. 22, 1893
RAGSDALE, GEO. H.....	March 25, 1895
RICHARDSON, JENNESS.....	June 24, 1893
SLATER, JAMES H.....	Feb. —, 1895
SMALL, EDGAR A.....	April 24, 1884
SMITH, CLARENCE ALBERT.....	May 6, 1896
STOWE, W. H.....	March —, 1895
THORNE, PLATTE M.....	March 16, 1897
THURBER, E. C.....	Sept. 6, 1896
VENNOR, HENRY G.....	June 8, 1884
WILLARD, SAMUEL WELLS.....	May 24, 1887
WOOD, WILLIAM.....	Aug. 9, 1885

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